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Date August 1982

From Chief, Research and Evaluation Staff
Health Education Division
Center for Health Promotion and Education

Subject Administrative Reviews and Critique of the Preliminary Version of "A Program Evaluation Handbook for Health Education Programs in Alcohol and Substance Abuse"

To
American Public Health Association Workshop Attendees
CDC-Workshop Attendees

The attached preliminary document is for your technical review and comment only. Questions and suggestions regarding this report should be addressed to me at the following address:

Centers for Disease Control
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Atlanta, Georgia 30333

Walter J. Gunn
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Attachment

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(PRELIMINARY VERSION*)

A PROGRAM EVALUATION HANDBOOK
FOR
HEALTH EDUCATION PROGRAMS
IN
ALCOHOL AND SUBSTANCE ABUSE

for the

CENTERS FOR DISEASE CONTROL
Center for Health Promotion and Education
Atlanta, Georgia 30333

by

IOX Assessment Associates
Culver City, California 90230

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* This handbook contains measures which have not yet been subjected to empirical verification. A subsequent project to validate the measures for use in health education programs is planned.

PREFACE

In recent years health educators have increasingly recognized the potential of systematic evaluation as a means to both appraise and improve their programs. For this potential to be realized, however, an effective mechanism for gathering relevant data is required. Until now, there have been instances where critical information about a program's effects has not been collected because of a lack of suitable measuring devices for gauging program effects. This handbook was prepared to rectify, at least in part, this deficiency in the evaluation of health education programs in alcohol and substance abuse.

More specifically, in 1980 the United States Centers for Disease Control (CDC) initiated a project to prepare seven collections of measuring devices which could be used by health educators to evaluate their programs. The measures were to be assembled in handbooks which would serve as resources for those wishing to evaluate health education programs in the various fields.[1] The materials contained in the following pages constitute the handbook of evaluation measures for the field of alcohol and substance abuse.

In essence, the project's architects hoped to provide health educators with a range of measurement devices that could serve as possible tools for the evaluation of a particular program. This "menu" of potentially relevant assessment instruments was expected to facilitate the assembly of evidence regarding a given program's effects.

This handbook is not intended to be prescriptive. Those involved in evaluating alcohol and substance abuse programs should regard the handbook only as a resource, that is, a repository of assessment tools which may be of use. The extent to which the handbook is actually useful depends, in large part, on the extent to which there is a correspondence between the intended impact of a given health education program and the outcomes which are assessed by the measures in the handbook.

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[1] The seven handbooks focused on the following areas: alcohol and substance abuse, diabetes, exercise, immunization, nutrition, smoking, and stress management. Information regarding the availability of the handbooks is available from the Centers for Disease Control.

A Capsule History of the Handbook's Creation

The development of this handbook was conducted by an external contractor, selected competitively on the basis of responses to a CDC-issued request for proposals. The contractor was to collect and develop evaluation measures for critical behavioral, knowledge, skill, and affective outcomes in the area of alcohol and substance abuse. A panel of experts was selected to guide the contractor in determining which outcomes were important enough to alcohol and substance abuse health education programs to require assessment devices. Three members of the panel were subject matter specialists. These experts were selected on the basis of suggestions from prominent national associations with a primary mission in alcohol and substance abuse. Nominations were screened to ensure the creation of a panel with a balanced view of the field. So, for example, at least one of the experts represented a national association and at least one possessed direct community level experience in administering local health education programs in alcohol and substance abuse.

In addition to these three subject matter experts, a fourth member of the expert panel was a health education generalist. Nominations for the health educator were solicited from national health education associations. Two specialists in evaluation and testing were also members of the expert panel. Additional subject matter experts representing interested national associations were also invited to serve as panelists. The names and affiliations of the expert panelists in alcohol and substance abuse are provided at the end of the Preface.

The expert panelists met for two days during mid-1981 in order to isolate the chief outcomes which health education programs in the field of alcohol and substance abuse could be expected to promote. After intensive deliberations, preliminary statements reflecting such outcomes were isolated, then set in priority order by the subject matter and health education experts. The evaluation and testing specialists did not participate in this setting of priorities.

The preliminary outcome statements selected by the panel were subsequently refined by the contractor's staff, then mailed to panelists as well as other interested individuals and organizations, all of whom rated the importance of each possible outcome statement. The prioritized list of outcomes that resulted was used to guide the selection and development of measures for this handbook. All newly-developed measures, along with the formal test specifications which were used to prepare them, were reviewed via mail by each panelist. In addition, many of the new measures were piloted on samples of approximately nine individuals. Feedback from these tryouts and the panelists' review was used to revise the new instruments. All of the new measures were also systematically reviewed by members of the contractor's staff in an effort to eliminate any potential sex, race, religious, or socio-economic bias.

While the new measures were being developed, a comprehensive search was conducted to locate existing measures which might match the panel-identified outcomes. The content of all these measures was carefully reviewed to ascertain its match with one or more of the panel-identified outcomes. All existing measures which corresponded to an outcome statement were then reviewed to ensure that they possessed no major technical or psychometric flaws which rendered them unsuitable for program evaluation use. Wherever there was substantial duplication among two or more existing measures, the measure which possessed the strongest supporting psychometric data, or the measure that was clearest and easiest to use, was chosen. All the existing measures which passed both the content screening and the subsequent reviews are included in this handbook.

The Handbook's Contents

There are several sections in the handbook, beginning with this Preface, which is largely an introductory elaboration of the handbook's origin and contents. The handbook's major sections are described below.

Chapter One contains a review of the fundamentals of systematic evaluation as applied to the appraisal of health education programs. Because the handbook will be used by experienced evaluators as well as by health educators with less evaluation background, it is possible that Chapter One's account of program evaluation will be of more interest to some handbook users than to others. Individuals using this handbook can decide whether their conversance with the basics of program evaluation permits them to skim Chapter One or skip it entirely.

Chapter Two describes the nature of the measures included in the handbook. The four different categories of measures found in the handbook are explained, and the interrelationships among these measurement categories are described. The rationale behind the types of measures newly developed for the project is presented. The procedures employed by project staff in locating and screening existing measures are also described.

Chapter Three provides guidelines for using the measures in program evaluation. Included in this chapter are practical suggestions regarding such matters as the selection, administration, and scoring of the handbook's measures.

Chapter Four lists the outcomes identified by the expert panel. The outcomes are presented in their amplified form, and each one is annotated to indicate where in the handbook the newly-developed and/or previously existing measures for that outcome can be found.

In Chapter Five the new measures constructed specifically for this project are presented. All of these new assessment devices are criterion-referenced measures. To facilitate use of the measures, each is preceded by a descriptor page which supplies the title of the measure, the title of the outcome for which the measure was created, and the characteristics of the population with whom the measure is to be used. This descriptor page also presents a brief general description of the measure. It must be stressed that these new measures have not yet been subjected to empirical verification, hence should be regarded as assessment devices whose technical qualities have not yet been verified.

Chapter Six contains the existing measures which were identified as corresponding with panel-approved outcomes. Each measure is preceded by a descriptor page which includes the measure's title, its authors, the type of outcome assessed, and the title of the outcome statement to which the measure corresponds. In addition, a brief description of the measure is provided, along with a summary of relevant information regarding the measure.

To facilitate photocopying and reproduction of the measures in Chapters Five and Six, all descriptive and scoring information has been placed on separate pages. The measures themselves can be readily copied and reproduced by health educators. Handbook users have permission to use all the measures in this collection for health education program evaluation, without needing to seek further permission from any authors or agencies.

In Chapter Seven the test specifications for Chapter Five's new measures are presented. These specifications consist of the rules and content constraints used to generate all new measures for the project. Each set of specifications constitutes the most complete description of the measure for which it served as the blueprint. A complete understanding of Chapter Five's measures is possible only by reviewing Chapter Seven's specifications.

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An annotated evaluation bibliography is presented after Chapter Seven, to provide follow-up reading for handbook users who wish to deal at greater length with the topics developed in Chapters One through Three. The annotated descriptions should make it possible for readers to determine whether the cited reference is appropriate for their purposes.

The handbook is concluded with an Index of Measures. This index lists, by title, all of the program evaluation measures contained in this book.

Acknowledgment of Contributors

The following individuals served as expert panelists for this handbook:

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The project which resulted in the creation of this handbook was funded by the Centers for Disease Control in Atlanta, Georgia. The project was initiated by the Research and Evaluation Staff, Health Education Division, of the Center for Health Promotion and Education. Dr. Walter J. Gunn, chief of that group, conceptualized the project, set forth its specifications, and supplied technical guidance throughout the project's existence. The project was originally conceived during conversations between Dr. Gunn and Dr. Carol D'Onofrio of the University of California, Berkeley School of Public Health. Throughout the project, those serving as project officers were Dr. Gunn and Dr. Diane Orenstein of the Centers for Disease Control and Dr. Donald Iverson and Dr. Patricia Mullen of the Office of Health Information and Promotion, Office of the Assistant Secretary for Health, Department of Health and Human Services. The project has substantially benefited from the continuing technical counsel of its project officers.

The handbook itself was developed by the following members of the staff of IOX Assessment Associates: Eloise Appel, Phyllis Jacobson, Rebecca Jaramillo, Elaine Lindheim, W. James Popham, Celia Rodrigo, John Ruggles, Laurie Salah, and Elanna Yalow. Robin Harte and Cecilia Marcelino prepared all of the handbook text. Numerous health educators also offered counsel regarding the handbook's measures and introductory materials. Without their expert assistance, development of this volume would have been impossible.

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CHAPTER ONE

PROGRAM EVALUATION CONSIDERATIONS FOR HEALTH EDUCATORS[1]

The development of strategies which might prove successful for program evaluation has received substantial attention in recent years. Many of the recommended approaches to program evaluation have been formally designated as evaluation "models," that is, systematic conceptualizations of the step-by-step manner in which evaluations should proceed. Some approaches emphasize the effects of a program. Others focus on the quality of a program's procedures. Still others primarily attend to the costs associated with a program. Because evaluators now have numerous evaluation approaches from which to choose, today's health educators can select those aspects from the various evaluation models which will prove most serviceable for a given evaluation assignment.

The purpose of this chapter, therefore, will not be to present a particular evaluation model, but rather to focus on considerations central to all evaluations. We evaluate programs in order to find out if they are working and how to make them work better. Sometimes a program evaluation is conducted by an individual not affiliated with the program itself--an individual formally designated as a program evaluator. Far more frequently, a program evaluation is carried out by the program personnel who are actually operating the program. In such instances these health educators simply change roles for a while, exchanging their program implementation responsibilities for program evaluation responsibilities. Thus, whenever the term "evaluator" is used in these introductory chapters, it refers both to the evaluator specialist and to the program staff member serving as evaluator.

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[1] In this introductory chapter an attempt will be made to present a series of salient considerations related to the evaluation of health education programs. But, clearly, it is impossible in a single chapter to discuss all evaluation topics with adequate depth. Hence, a set of references for further reading has been provided. This evaluation bibliography, which has been annotated to provide a general description of each volume's contents, can be found on pages 291. Throughout the handbook's early chapters, the reader will be directed to various of these references for further information about the topics being discussed.

Focusing the Evaluation

Effective evaluations help people make better decisions about programs. Anyone setting out to evaluate a health education program, therefore, should be certain to focus the evaluation on the sorts of decisions that are likely to be at issue. This includes getting a clear idea about the purpose(s) of the evaluation as well as identifying the individual(s) or group(s) who will use the evaluation's results.

The nature of the program being evaluated makes a substantial difference in an evaluation's focus. Some health education programs are carried out chiefly to develop and refine the program itself. We can refer to these programs as experimental programs in the sense that they are programs of yet unproven effectiveness. In evaluation studies of experimental programs there is an attempt to isolate the most effective program or the most effective program components. Another type of health education program is a demonstration program, that is, a program in which proven approaches are offered in an effort to secure support or adoption from a larger clientele. Demonstration programs, then, are targeted toward two audiences, the program's participants and the individuals or groups whom the demonstration is supposed to convince. When evaluating demonstration programs, we often attempt to verify whether a program has been disseminated with fidelity to its original conception or, if not, why. Finally, there are service programs in which proven approaches are offered in an attempt to improve the health and well-being of designated target groups. In such programs evaluation often takes the form of monitoring. Two or more of these three types of health education programs can, of course, be provided in combination.[2]

Differences exist in the evaluation activities depending on the purpose of the evaluation, the type of health education program being evaluated, and the nature of the decision-makers for whom the evaluation is being conducted. Too many times program personnel avoid evaluation on the grounds that theirs is only a demonstration program and, hence, needs no systematic appraisal. Or, again, those carrying out a service program might fail to evaluate their efforts because, "after all, we are merely disseminating a proven methodology." But program evaluation is needed for all three kinds of health education programs. The issue is not whether, but how.

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[2] For an extended consideration of these three types of programs, see Gunn, W. J. Evaluation: Proving and improving your programs. A paper presented at the Fifth International Conference on Health Education, London, September, 1979.

Objectives and evaluation. Health education programs come into existence in order to bring about worthwhile effects. Most health education programs, therefore, are organized more or less systematically around some form of program objectives. The more explicitly these objectives are formulated, the more useful they are in carrying out evaluations. Indeed, one consideration in conducting an evaluation is the extent to which a program's objectives have been achieved. It is for this reason that evaluators often work with program personnel in an effort to have those individuals create objectives which describe the desired post-program behaviors (including performance on measuring devices) of program participants.

Too often program designers describe their objectives in such lofty and loose language that it is next to impossible for evaluators, even after the program is over, to tell whether the objectives have been attained.

There is substantially more to program evaluation than merely discerning whether a program's goals have been achieved. For example, there may be program effects, both positive and negative, which although profound were not anticipated in the program's stated objectives. In addition, there is the quality of the objectives themselves. Perhaps the program's goals are truly trivial. A skillful evaluator can profitably work with program personnel to improve the nature of their aspirations. Clarified and more defensible objectives can be a boon to both program personnel and evaluators.

Summative and Formative Functions. Since the expressions "formative evaluation" and "summative evaluation" were introduced over a decade ago, considerable attention has been given to the virtues of each type of evaluation study. In the late sixties and early seventies, a good many evaluators were persuaded of the virtues of summative studies in gauging a program's overall effectiveness. To their distress, however, it often turned out that definitive judgments were difficult to achieve. Rarely did a summative evaluation study settle conclusively whether a given program was sufficiently meritorious to make a go/no-go decision on the basis of that study alone. More often than not, a host of complicating elements proved far more influential in the nature of the final decision than the results of an evaluation study.

As a consequence, it became increasingly clear that, in many instances, formative evaluation studies might prove useful. Formative evaluation is not end-of-the-line evaluation. Rather, such evaluation is an ongoing endeavor as the program is designed, installed, and maintained. Whereas summative evaluation's mission is to provide a final judgment of a program's overall merit, formative evaluation's mission is, on a continuing basis, to bolster a program's quality. The effective formative evaluator functions less as an external judge and more as a collaborator, a member of the team whose task it is to monitor the program in order to improve its quality and the decisions regarding it.

These two evaluative roles are not mutually exclusive. An evaluator's main task is to collect information which is maximally useful in improving the quality of decisions made about programs. Evaluation should identify the areas in which a health education program is having an impact, as well as those in which it is not. Effective components can then be retained; ineffective components can be strengthened or dropped. A mechanism for the systematic collection of information regarding health education programs can provide a solid data base for the continuing refinement of such programs and for improvement in the general level of services provided.

Conducting Evaluation Studies

How can evaluations be conducted so as to achieve their maximum benefits? It is sometimes thought that program evaluations must include complicated and elaborate data-gathering designs in order to yield a decisive and compelling set of data. This is simply not the case. Program personnel and evaluators should strive to conduct their studies and gather data in such a way that the ambiguity of results can be kept to a minimum. That is, evaluations must attempt to determine whether a program works, what makes a program work, or what prevents it from working. Evaluation data-gathering designs serve as the means to this end by delimiting the procedures that will be used to explore the workings and impact of a program.

The conditions under which we gather data will permit us to make inferences about a program's overall impact on participants or, perhaps, the differential effectiveness of the program's various components. To select optimal designs for their investigations, evaluators must have a broad knowledge of the available design alternatives and the strengths and weaknesses associated with each. Evaluators must also work closely with program staff to determine which decision options can actually be illuminated by evaluation studies. The most sensible evaluation study for a given context can then be planned.

Rights of Human Subjects.[3] Health education programs are designed to improve individuals' health and well-being. When we evaluate those programs, therefore, we characteristically focus on the impact of the programs on human beings. Some evaluators, however, become so caught up with the importance of appraising a health education program that they overlook the rights of the individuals being evaluated.

Above all, the evaluator should be guided by a respect for human dignity, hence should not engage in evaluative activities which in any way demean an individual's rights. Prominent among the principles which should guide evaluators is that of informed consent. The principle of informed consent requires that an evaluator secure, in advance of the study, agreement of all participants in an investigation. This consent is obtained after the potential participants have learned about the nature of the investigation, at least insofar as their participation is involved. This principle properly reflects the evaluator's concern for human dignity, since it rules out the possibility of making individuals serve, unknowingly, as subjects in an evaluation.

A key tenet in most ethical codes regarding human subjects insists on the confidentiality of all participant data gathered as a consequence of an investigation. Because the evaluator is not concerned with an appraisal of individual learners but rather with the worth of health education programs, the principle of participant confidentiality usually poses no problems. Evaluators must be careful, however, to devise protective safeguards, such as anonymous completion of forms and careful handling of data, that ensure the confidentiality of the data.

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[3] For additional information about the rights of human subjects and the ethics of evaluation, see Annotated References Nos. 1, 21, and 30.

Internal and external validity.[4] Characteristically, an evaluation examines a program's effects in order to determine whether individuals have changed as a result of their participation in the program. The pivotal issue here is whether any observed changes in the status of participants can be attributed to the program. Could other factors such as participant maturation, familiarity with the measures used in the evaluation (testing), or external influences such as a mass media campaign (history), account for the observed changes? An ideal data-gathering design helps rule out viable explanations, other than the program, for measured effects. Such a design deals with the issue of internal validity and addresses the question of whether observed effects can be attributed, with confidence, to the program. Threats to internal validity weaken our ability to attribute the effects that were observed to the program and not other factors.

Another important issue is the external validity of evaluation studies. Can the findings from a specific evaluation be generalized to the next group of participants or to variations of the program (e.g., to a similar health education program in a different school or to the same program held during the following year?) Could we expect the program to have an impact in other settings or at other times? What would be the effects with different participants, modes of presentation, or program personnel? External validity focuses on the need to demonstrate that the observed program effects can be expected to occur under conditions other than the specific instance of the program being evaluated. With external validity, evaluations can serve as more than tributes to successful programs or postmortems for unsuccessful ones by providing useful information as program personnel look to the future.

It is important to distinguish between internal and external validity, for different information may be required to establish each one. A procedure that increases internal validity may weaken external validity. Experimental control, which enhances internal validity, must be weighed against feasibility and generalizability. Evaluators must try to balance the problems associated with threats to internal and external validity, by selecting a data-gathering design that best addresses the information needs of the program and allocating evaluation resources accordingly. These priorities must come from the context of the program itself, since there are instances in which an evaluator should stress one type of validity rather than the other. Emphases on internal or external validity will vary as a function of the program decisions to be made.

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[4] For additional information about internal and external validity issues, see Annotated References Nos. 6, 9, and 10.

Design options.[5] The key to selecting an appropriate evaluation design is to pick the one that best deals with the needs of those involved with a program, such as the program's staff, participants, or funding agency. In some instances, health educators may be interested in the effects of the particular program that they are providing. "Will participants be able to use alcohol responsibly after attending this program?" In other instances, health educators may be trying to develop model programs that will subsequently be disseminated locally or even nationally. "Can we develop a program that will encourage individuals to refrain from abusing drugs, whether they are teenagers in Duluth, working mothers in Tampa, or retired business executives in New Haven?" An evaluator would have to design very different studies in order to answer these fundamentally different questions. As indicated earlier, health educators must design their studies so that they serve the specific purposes of that evaluation. There is no such thing as a general-purpose evaluation.

An understanding of a few basic principles can help evaluators select designs well suited to their needs and, perhaps more importantly, determine the limitations of whatever design is implemented. No evaluation study will be perfect. Every study leaves some questions unanswered. Evaluators need to be clear regarding what they have learned about a program and the degree of certainty associated with their findings, then convey this information to other interested audiences.

To illustrate some of the major considerations in selecting data-gathering designs, consider a six-month health education program aimed at modifying Behavior X. If participants' status on Behavior X were measured at the close of the program, we could represent that situation schematically as follows:

Program ⟶ Measurement

If this were the design employed, what could you tell about the program's impact on participants' behaviors? Using such a design, how confident would you be that the participants' reported behavior changes were attributable to the program?

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[5] For additional information about evaluation design options, see Annotated References Nos. 6, 9, and 17.

It would be difficult to attribute definitively any change in behaviors to the health education program. The program, indeed, may have been totally ineffectual, and participants' post-program behaviors might be identical to those they possessed before the program. The measurement process might be detecting behavioral patterns that participants brought to the program, not those that were affected by the program. Because we have no measure of behaviors prior to the program, we can't distinguish between preexisting behaviors and program effects. Hence, with this data-gathering design, it may be impossible to discern the influence of the program.

But even with such a basic data-gathering design it may be possible to secure meaningful program evaluation data. Suppose, for example, that a health education program is promoting a knowledge outcome so advanced that you expect participants will not be familiar with its content. In that setting one could assume that any post-program knowledge is attributable to the program's impact, because participants would probably not know the information without the program. It might well not be worth the resources necessary to demonstrate conclusively that participants began the program unfamiliar with the outcome's content.

These examples illustrate the chief mission of data-gathering designs, namely, to rule out plausible rival hypotheses, other than the program's impact, that might account for the post-program status of participants. If there is reason to believe that participants' pre-program status may account for their post-program status, then a data-gathering design should be selected which permits the evaluator to rule out that rival hypothesis.

Now suppose that, in order to avoid the major shortcoming of the previous design, we measure participants' behavior both before and after a health education program. We could represent that design as follows:

Measurement ——▶ Program ——▶ Measurement

Let's assume that the result was a substantial shift toward more desirable behaviors between the initial and the final measurement. Could this change in behaviors be ascribed to the program? We cannot be sure. There are many other factors that may have led to the observed change in behaviors. For example, there may have been a significant event, an event totally unrelated to the program, which influenced participants' behaviors. If the program were designed for children, it may have been that the participants matured during the time frame of the program. Thus it may have been increased maturity rather than the program which caused the altered behaviors. The program itself may have contributed nothing to the shift of behaviors.

But, as was true with the earlier design, if the rival plausible hypotheses for explaining posttest results are accounted for satisfactorily by this data-gathering design, then it is sufficient for the task at hand. In fact, many formative evaluations feature such simple yet serviceable pretest-to-posttest designs involving only one group of participants.[6]

We can eliminate some of the more common rival explanatory hypotheses by using a data-gathering design in which we employ a *comparison or control group*. The use of a control group (untreated individuals) or comparison group (individuals receiving a different program) can be illustrated as follows:

Group 1: *Measurement* → *Program* → *Measurement*

Group 2: *Measurement* → *Measurement*

In this design, as we see, a control group (Group 2) is assessed before and after the program, but this group never receives the program itself. Under such circumstances we can be more confident that if the program participants' pre-to-post behaviors shift, and the control group's pre-to-post behaviors remain the same, the program caused the shift.

There are, however, some disadvantages to this design. It may be that the initial measurement was *reactive*. A reactive measurement is one which by itself, or in concert with the program, influences participants' behavior. Attitude inventories and self-report questionnaires about behavioral practices are often reactive. Suppose that in this case the pre-program instrument alerted participants to what was to be measured, hence influenced their performance on the second measurement. In addition, measurement is expensive, and measuring control groups can be a relative waste of valuable evaluation resources. Time and money can often be better spent studying the program being evaluated rather than studying a no-treatment control group of little interest. (The merits of comparative designs will be described later.) Health educators should not ritualistically employ control groups in their designs if the question at issue can be answered without their use.

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[6] Note that this design requires measurement before as well as after a program. This points to a commonly accepted but often overlooked principle of effective evaluation. Evaluation is most effective when it is initiated at the beginning of a program, often prior to the program's formal inception. If evaluators are not called in until the end of a program, they sometimes serve as little more than test proctors.

There are situations in which health educators may wish to appraise the effects of their programs on the basis of routinely administered measurements, such as periodically administered questionnaires or the kinds of *archival* data one often finds recorded in health agencies. For instance, suppose we were evaluating a "parent health awareness" program and were interested in the number of checkups from physicians sought by parents of infants. Assuming that such information is available in the county health department's records, the evaluator may wish to employ a *time-series design*. In a time-series design we measure at periodic intervals both before and after the program. By observing the pattern of measurements prior to and following the program we can discern if the program had any effect.

To clarify, Figure 1.1 presents three illustrative time-series data patterns of six periodic measurements (M_1 through

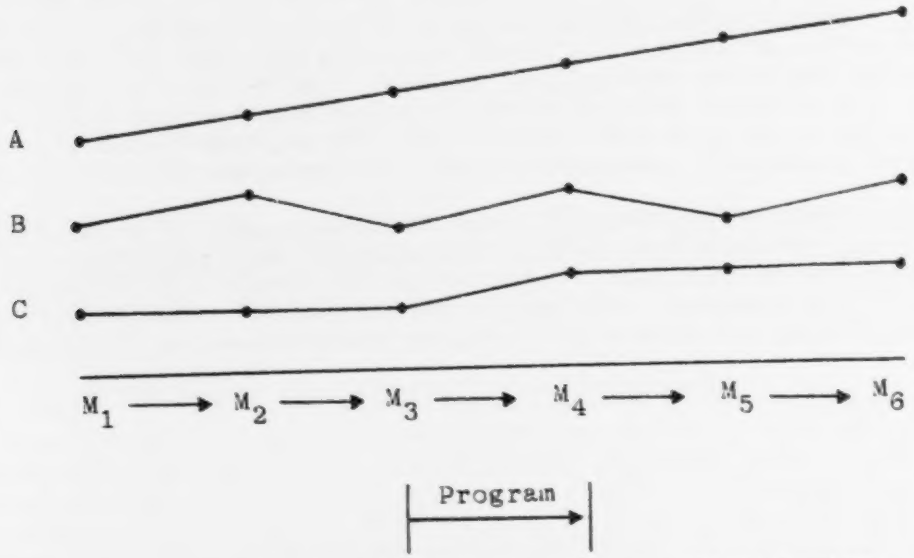

Figure 1.1. Three data patterns from a time-series design.

M_6) taken every two months over a 10-month period. A two-month health education program is offered midway in the time series, that is, immediately following Measurement Number Three (M_3) and just before Measurement Number Four (M_4). Note that the difference between M_3 and M_4 (that is, immediately before and after the program) is identical in all three data patterns. Yet in data patterns A and B we would be reluctant to attribute the M_3 to M_4 growth to the program's effects. In pattern A there are consistent increments over the entire 10-month period, not just the period associated with the program. In pattern B the increments and decrements fluctuate too much. Only in data pattern C could we make the attribution of program effects with some confidence. Although the data analysis procedures associated with time-series designs are fairly complicated, it is often possible to discern program effects merely from inspections of patterns in plotted data such as those shown in Figure 1.1.

In using time-series designs to evaluate programs, health educators must be particularly attentive to the possible contaminating impact of an event, external to the program, that may have influenced the observed data patterns. For instance, referring back to Figure 1.1, suppose that a widely publicized national outbreak of influenza had occurred at the same time that the "parent health awareness" program was being offered. Suppose also that parents were being urged by the media to seek checkups for their infants. Then the growth pattern observed in pattern C might be more associated with that event's effects than with the health education program's effects.

A time-series design, though often used with archival data, can be employed with any sort of periodically gathered data such as routinely administered attitude inventories. A time-series design can be applied to evaluate one program at a time or to evaluate several programs simultaneously. For example, suppose the three data patterns seen in Figure 1.1 were data associated with simultaneously offered programs. In this instance the program yielding data pattern C would be the only one resulting in detectable effects.

In utilizing time-series designs one must be certain to have a reasonable number of measurement opportunities over an extended time period. That is, one would not want to employ such a design unless clear data patterns were possible to discern.

Randomization[7]

In the designs we have discussed thus far, the focus has been on evaluating one program with one group of participants. This may be the situation for many health educators who are only interested in considering the specific program they are providing. But suppose, as we described earlier, you are interested in the general effectiveness of a program which will serve as a model to be implemented in a variety of settings, with different types of participants. How would you design such a study?

One technique that can prove useful in such settings is randomization. We select or assign things randomly when we do so in a nonsystematic manner, such as by using a table of random numbers (found in most statistics texts). When the participants taking part in the program to be evaluated have been selected at random from a larger population of potential participants, then we can be reasonably confident that those involved in the evaluation will be representative of that larger population. There is less likelihood that the participants being studied in the evaluation are atypical, hence inappropriate subjects to include in the study.

This sort of randomized selection of subjects is particularly important when we wish to generalize from the results of our study to a larger population. This procedure may also be useful when there are more applicants than vacancies for a program or when not all potential clients can be served.

Another use of randomization arises when we determine which of several programs individuals are to receive. If we want to compare the effects of different programs, then we want to be as equivalent as possible. To this end we can employ a randomized assignment procedure whereby we randomly place individuals in the programs to be compared.

The two procedures of randomized selection and randomized assignment are illustrated in Figure 1.2. Note that we randomly select participants for programs from the pool of potential participants, then randomly assign those individuals selected to either Program A or Program B.

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[7] For additional information about randomization, see Annotated References Nos. 6 and 19.

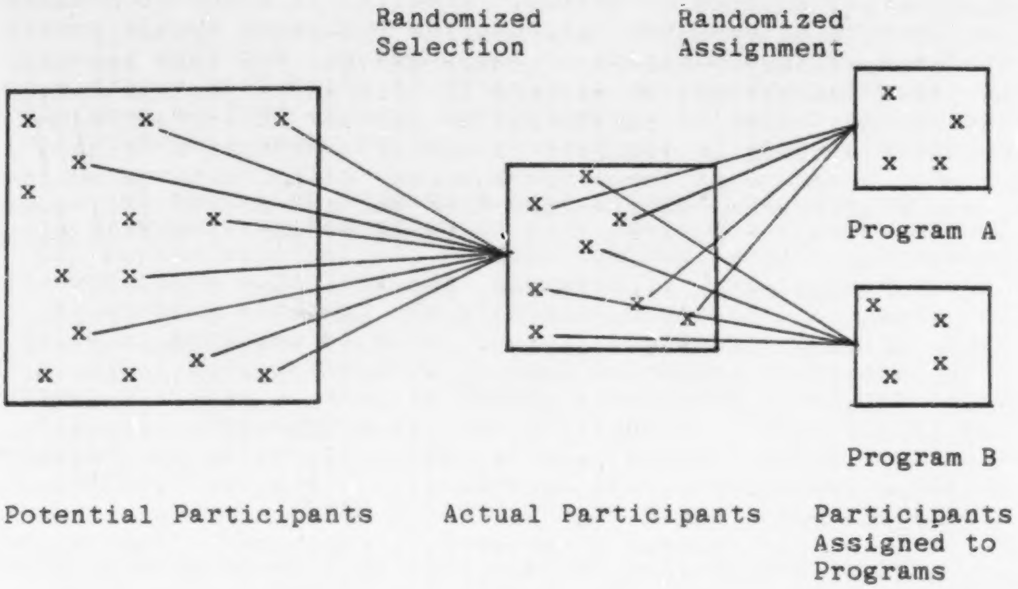

Figure 1.2. Randomized selection of participants from pool of potential participants and randomized assignment of participants to programs.

In actual practice, of course, program personnel often do not have the luxury of constituting groups via randomized selection or assignment, and there are in fact situations where program personnel would not want to use such procedures. As a consequence, we are frequently obliged to use evaluation designs that can help disentangle program effects from preexisting differences either between participants in different programs or between participants and nonparticipants in the same program. Program evaluators should become conversant with such comparative designs and the settings in which they should be used, in order to select a design that will be most effective in forestalling the likelihood that factors other than the program itself accounted for participants' post-program status. Design selection must always be tempered by practical constraints such as available financial resources and the acceptability to program sponsors and participants of randomization techniques.

Comparative designs. The use of comparative designs also can prove helpful in the effort to come up with meaningful data. Comparative designs, in fact, arise because of the basic function of evaluators, namely, to aid decisionmakers. Decision-makers ordinarily make selections among alternative courses of action. Ideally, if a decision-maker is choosing between two options, the evaluator should supply evidence as to the merits of each option. For this reason, in designing evaluation studies it is often less sensible to include an untreated control group than to include comparison groups representing the various options under consideration.

For example, suppose that a program developer for a health education project were choosing between two ways of presenting program content such as (1) lectures versus (2) independent study. If possible, the evaluator would consult the research literature regarding the probable virtues of each option. Thereafter a study could be designed in which both strategies, or variations of both strategies, were tried out for a reasonable period of time in order to compare the relative effectiveness of various approaches. In this situation there would be little reason to employ an untreated control group, because it is unlikely that a no-treatment option would be chosen by the program staff.

The data-gathering designs treated here have been relatively simple. There are, however, a number of far more complex designs than we have considered. Inexperienced program evaluators sometimes become so entranced with complicated data-gathering designs that they compulsively apply them whenever carrying out an evaluation study. But evaluators do not need to employ excessively complicated designs. There are innumerable instances when simple data-gathering designs are sufficient.

This is particularly true in formative studies when evaluators are looking for rapid-turnaround data to guide program personnel in making upcoming program decisions. In such settings the evaluator needs to assemble timely decision-relevant information. The use of complex data-gathering designs may, in such circumstances, represent a squandering of evaluation resources. Only when complex designs are needed to eradicate threats to internal or external validity should they be adopted.

Program evaluators frequently also are so concerned about detecting the effects of programs that they fail to consider the costs needed for the programs to produce those effects. Yet decision-makers need guidance regarding not only the results they can expect from a program, but also the financial resources required to achieve those results. For this reason program evaluators should consider the relative costs of programs. To illustrate, how much does it cost Program *A* to produce a given result in relationship to how much it costs Program *B* to produce comparable results? Judgments about a program's impact in the absence of considerations about its costs are potentially superficial.

Criterion-Referenced Measurement[8]

Although there are various approaches to program evaluation and each has its own special emphases, there is one common feature of nearly all evaluation approaches. That common feature is the use of systematic evidence regarding a program's effects. To secure evidence of program effects, we characteristically employ measurement instruments. But some instruments are far more suitable for assessing a program's effects than others.

For more than a decade, educational measurement specialists have directed their attention toward an emerging form of assessment known as criterion-referenced measurement. Whereas norm-referenced measurement attempts to ascertain examinees' status in relationship to other examinees, criterion-referenced measurement attempts to ascertain examinees' status in relationship to a clearly defined set of behaviors. In fact, it is because the performances of examinees are interpreted according to a clearly defined domain of criterion behaviors that we say a measure is "referenced" to those criterion behaviors, hence classified as a criterion-referenced measure.

The essence of a criterion-referenced instrument is the clarity with which it describes that which is being measured. Because norm-referenced instruments are relative measures, emphasizing relative comparisons among examinees, they often do not provide a clear description of exactly what it is they are assessing. In contrast, because criterion-referenced instruments are absolute measures, designed to determine exactly what it is that examinees can or cannot do, independent of the performance of other examinees, they should provide an unequivocal description of what they are measuring.

It is this clarity regarding the attributes that they assess that renders criterion-referenced measures ideal for program evaluation. Consistent with the spirit of providing useful information for decision-makers, criterion-referenced instruments describe, with precision, the nature of what is being measured. Hence, when criterion-referenced measures are used in a program evaluation, decision-makers can readily interpret the evidence being supplied.

The best way to describe what a particular criterion-referenced instrument measures is via the test specifications which are developed to generate the items on that measure.

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[8] For additional information about the nature and development of criterion-referenced measures, see References Nos. 4, 18, and 27.

Test specifications identify the particular rules and content limits used in constructing a measure. The test specifications operationalize the attributes which are being assessed by delimiting the eligible content and format of the measure.

As with any assessment strategy, there are varying degrees of quality in criterion-referenced measures. Not every instrument described as "criterion-referenced" truly deserves that label. Evaluators of health education programs, therefore, should become knowledgeable regarding the characteristics of high quality criterion-referenced measures. Several dimensions of a properly constructed criterion-referenced instrument are described below.

Clarified descriptions. The single most important element of a properly constructed criterion-referenced instrument is that it adequately describes the attributes it claims to measure. That description, contained in the test specifications, may take a variety of forms. Irrespective of the particular scheme employed, when one reads the descriptive information associated with a criterion-referenced instrument, it must be possible to discern unambiguously what is being measured. By inspecting the test specifications in Chapter Seven the reader can get an idea of the level of descriptive rigor required by criterion-referenced tests.

A manageable number of attributes. Historically, many measures have attempted to cover vast arrays of content. The net effect of this broad coverage has often been that those attempting to use the results from such instruments become overwhelmed by the profusion of discrete attributes being assessed. A properly constructed criterion-referenced instrument will focus on a limited number of dimensions. As a consequence, program personnel can direct their efforts toward those dimensions and evaluators can describe program effects along those dimensions. A criterion-referenced instrument that attempts to measure 10 or 20 discrete outcomes, for example, would likely prove less useful to program personnel and evaluators than an instrument which measures only one significant attribute. In some instances, particularly for diagnostic purposes, it may be helpful to design an instrument that assesses the major subdimensions of a more general attribute. Even in such cases, however, the guiding rule should be to employ only a manageable number of categories.

An adequate number of items per measured attribute. In order for a measure to yield adequate information about examinees' status regarding a given attribute, it is useful to provide multiple instances for examinees to display that attribute. Hence, criterion-referenced measures should provide a reasonable number of test items for the attributes that they measure. It is probably insufficient to attempt to measure a cognitive or affective attribute with one or two test items only. In some cases, a handful of test items per measured attribute or its subdimensions can aid the evaluator in gaining rough estimates of certain program effects. But, generally speaking, at least five to ten items per attribute typically constitute a minimum for measuring significant knowledge, skill, and affective outcomes in the health field.

Reliability.[9] Criterion-referenced instruments, just as norm-referenced instruments, must measure whatever they are measuring with consistency. The consistency with which an instrument measures is known as its reliability. To illustrate, suppose a 30-question knowledge test is administered on a given day, then re-administered to the same examinees five days later, with no intervening instruction. If the test is reliable, we would expect examinees to receive essentially the same scores on both testing occasions. If the test, when re-administered, yields substantially different examinee scores, we know that the test is not measuring with consistency, forcing us to conclude that it is unreliable.

There are several different kinds of reliability indices which can be calculated to reflect the consistency with which a given instrument measures, for example, test-retest or equivalent forms reliability. The kind of reliability data needed to appraise a measure for possible use in an evaluation study should be in accord with the way the measure will be used in the study. If a measure is to be used on a test-retest basis in an evaluation, for example, then information about that type of reliability is germane.

All reliability coefficients range from 0 to 1.0, with coefficients of .80 or higher indicating highly reliable measures. Although space limitations preclude a more complete discussion of reliability, evaluators need to become conversant with this key attribute of properly constructed tests. At this point, it must suffice to alert program evaluators to the importance of securing evidence regarding the reliability of any measure to be used in an evaluation study.

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[9] For additional information about determining the reliability of measuring instruments, see Annotated References Nos. 2, 15, and 27.

Validity.[10] An imperative attribute of a properly constructed measure is that it be valid. An instrument is valid if it measures what it purports to measure. To illustrate, in the health field we often use self-report measures as a way of finding out about individuals' "real life" behaviors. If our self-report inventories are valid, then those measures will secure responses which are accurate indicators of the way that respondents actually behave. To the extent that responses on the self-report measures do not coincide with respondents' actual behaviors, then the measures are invalid.

There are several varieties of validity studies, each yielding somewhat different but conceptually related sorts of evidence about a measure. For example, one approach to validity arises when we use self-report measures as proxies for physiologic measures, such as when we use self-report questionnaires to elicit an account of participants' health behaviors, then attempt to correlate the questionnaire responses with the results of physiologic tests that reveal something about people's actual behavior. If the questionnaire data do, in fact, correlate substantially with the physiologic measures, then the questionnaire is, at least to some extent, validated.

Another approach to validity arises when we use measures as predictors of some subsequent criterion behavior, such as when we try to use responses to an affective inventory gauging one's intention to engage in a particular health behavior as a predictor of individuals' later health behaviors. If the affective measure does, in fact, correlate substantially with subsequent observations of the health behavior, then evidence of the measure's validity has been obtained.

Absence of bias.[11] In the past decade or two we have become sensitized to the distressing truth that many educational assessment devices contain items which are biased against particular subgroups such as ethnic minorities and women. An example of a biased test item would be a knowledge question which, because of peculiarities in its content or its wording, is more difficult for lower-income examinees to understand and answer correctly. Test items which use content and terminology apt to be known only by the affluent would certainly be biased against the less economically advantaged.

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[10] For additional information about determining the validity of measuring instruments, see Annotated References Nos. 2, 15, and 27.

[11] For additional information about methods for avoiding test bias, see Annotated References Nos. 5 and 25.

Other sorts of bias which can adversely influence examinees' performances arise when test items are offensive to particular groups of individuals. For example, if test items include content that is seen to be derisive to women or to members of particular ethnic groups, then examinees from those groups are not apt to perform at their best on such items because agitation over the offensive content may interfere with their responses to the items.

A properly developed measure will pay adequate heed to the avoidance of biased items. There are now available both judgmental and empirical techniques for detecting the presence of biased items in measures. One or both approaches should be used to determine the degree of bias in criterion-referenced test items.

In reviewing the various dimensions of a properly constructed criterion-referenced measure, it is important to note that any given instrument may not possess all these qualities. Often one must choose among measures which embody some but not all of these elements. The important point is that merely because a measure is labeled as criterion-referenced does not indicate that it is of sufficient quality to be used with satisfaction in evaluating a health education program. Further scrutiny of the measure's quality is mandatory.

Sampling Considerations for Data Collection[12]

The data-gathering requirements of evaluation can, if evaluators are not attentive, become a disruptive and burdensome intrusion into ongoing programs. Accordingly, skillful evaluators should restrict their data-gathering forays to the least intrusive form possible.

One way to minimize an evaluation's intrusiveness is through sampling. Although most people are familiar with the form of sampling that involves selecting some individuals from larger populations of individuals, it is also possible to sample items[13] when administering program evaluation measures.

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[12] For additional information about sampling procedures, see Annotated References Nos. 7 and 8.

[13] A measure, such as the criterion-referenced measures found in Chapter Five, generally consists of a group of items, such as questions on a test or statements on an attitude inventory.

To estimate how a large group of people would respond on a particular measure, it is not necessary to administer that instrument to all the individuals in the group. Instead, we can sample individuals from the group by selecting either a simple random sample or a random sample stratified on the basis of program-relevant factors such as age, sex, and socioeconomic status. Assuming that the sample is correctly drawn, we can estimate the status of the total group based on the responses of this sample.

In the version of sampling described above, we select representative samples of people to represent a larger population. Suppose, for example, that an evaluator has a measure that is to be used to determine program effects. Assuming a reasonably large number of program participants, say 50 or so, we could randomly administer the measure to one half the participants only. In essence, this approach allows us to infer how the total group of participants would score on the measure although only half of the participants completed it. We could thus estimate how the total group of participants would have responded, yet halve the amount of participant time required for data-gathering.

In a similar sampling procedure, we could administer two or more measures at once. Suppose that two measures, Inventory X and Inventory Y, are to be given to program participants. We can randomly assign one half of the participants to one measure and one half to the other. While each participant needs to respond to one measure only, we can still derive a defensible estimate of how all the participants would have responded to both instruments.

In addition to sampling persons, as in the previous examples, it is also possible to sample items so that different sets of items are randomly selected to be administered to different persons. In such an approach we give each program participant only a sample of the items for which we want to obtain evaluation data. For example, suppose a program evaluator wishes to administer a 40-item test. Given, say, 60 participants in the program, the evaluator could divide the test into four sets of 10 items each and administer each set of items to 15 participants. By having the four groups of 15 participants each complete a different set of 10 items, the total group's performance can be estimated. This approach allows the data-gathering to be carried out in one-fourth the time that it would have taken to administer the total 40-item test to all participants.

Given the relatively small numbers of participants in some health education programs, is it really appropriate to sample either persons or items? How large must groups be before sampling procedures can be sensibly used? Although an unequivocal answer to this question would be desirable, such a definitive answer does not exist. Some texts on sampling do provide rules of thumb for estimating the size of samples needed for detecting group differences in relationship to the magnitude of differences sought and the nature of the groups being sampled. At best though, these are rough estimates. It is important to recognize that the task of identifying a sufficiently large sample is more difficult than usually thought.

Intuitively we may recognize that when we start with a very small group of program participants, the use of sampling is risky. For instance, if there were only 15 participants in a program, few health educators would try to split these participants into three groups of five each for purposes of taking different tests. Even though each group represents one-third of the total population, there is too much likelihood that a sample of five individuals does not properly represent the total group.

The variability of participants' anticipated performances on the measures is the primary influence on the sample size necessary. The following example illustrate this principle. If a man's socks were all stored in a drawer, yet there were only black and brown pairs, he wouldn't need to draw out too many pairs until he had a reasonably good idea of the characteristics of the total population of socks in his drawer. But suppose he had socks in 10 different colors. Then he would most likely have to take out many more pairs until he could reach an accurate estimate of the colors of socks in the drawer. In much the same way, if it is expected that participants' scores on a test will be relatively homogenous, then a smaller number of respondents will be needed than if participants' scores are expected to be widely varied.

In considering any of these sampling procedures, it should be noted that the evaluator is essentially focusing on a group of participants _in the aggregate_. Because evaluations are typically concerned with the effects of programs on groups of participants, sampling procedures are usually appropriate. If, however, program personnel need individual data on all examinees on all measures, then sampling is not appropriate.

When to Administer Measures

Decisions regarding when to administer the measures depend on the data-gathering design selected. Conceivably, there are five time periods during which it may be useful to obtain information on participants, and there may be reasons for repeated measurement during some of these periods. These time periods are depicted in Figure 1.3.

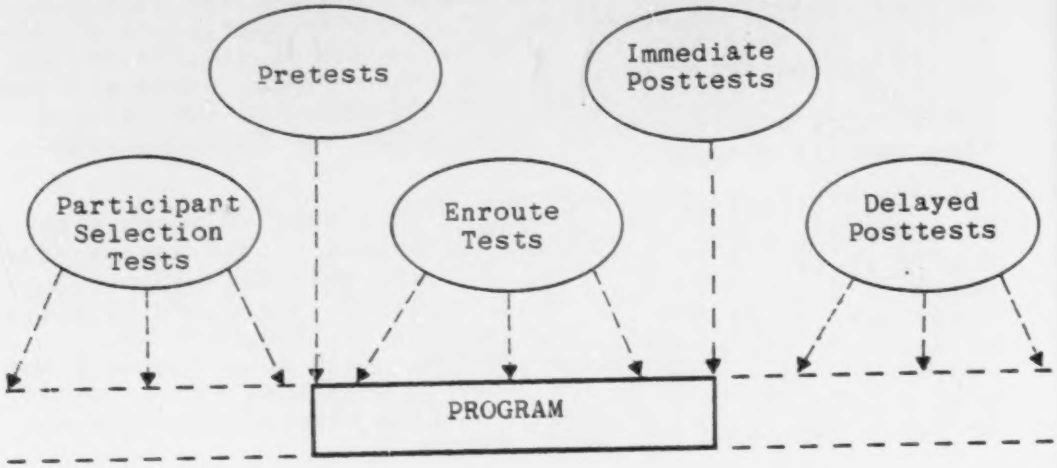

Figure 1.3 Possible measurement times in program evaluation studies.

The first point at which one might choose to obtain information would be prior to the selection of participants. In some health education programs anyone who wants to attend the program is admitted. In other programs there may be more applicants than program openings. Or perhaps there are multiple variations of a program, and different participants must be assigned to different variations. In these latter cases it may be useful to have information to help in the selection of participants. One may want to select as participants those individuals most in need of the program, or those with the most (or the least) perceived ability to attain the behavioral change sought in the program. In any event, information at this juncture may help the selection process become more effective than it might otherwise be.

Often it is useful to have information about participants immediately prior to their starting the program. Such data, often referred to as pretest data, may be used to identify participant weaknesses so that instruction can be targeted directly to those areas rather than emphasizing things that participants already know. Such data may also be used as a baseline, in conjunction with data collected at the end of a program, to determine the impact of the program. If data have already been collected on participants at the selection stage, it might be unnecessary to re-administer measures unless it has been a long time since the initial administration, or unless there are reasons to expect a change in participants' performance.

Measures can also be administered during a program to secure a current reading on the status of participants. Such en route data can be used to redirect program resources during the program itself. One or more en route measurements can provide program personnel with ongoing status checks on participants' progress. Such data may be even more useful than data collected at the end of a program, for they provide information while there is still time to act on it.

Immediate posttest data are data collected directly following the program. Such data may be compared to pretest data in order to provide an estimate of the changes in participants following participation in the program. Participants' posttest performances can also be contrasted with scores from participants in other programs. Such data may also be used by themselves as a measure of the absolute status of participants.

Delayed posttest or follow-up data, e.g., data collected one year after a program's conclusion, are often equally if not more important than immediate posttest data in evaluating a program. Far too frequently data collection efforts are limited to immediate outcomes, when measurement is most convenient. Ultimately, however, program personnel are more interested in effecting long-term behavioral, affective, or cognitive changes. It is sometimes difficult to infer such long-term changes on the basis of information gathered solely at the end of a program. Hence, some follow-up measurement, perhaps repeated, is usually warranted.

Clearly, it is not sensible to administer all measures at all time periods. Evaluators, in collaboration with program personnel and other interested parties, need to select an evaluation design that focuses on the most appropriate times for gathering data. Just as one wishes to avoid administering an overwhelming number of different measures, one also needs to avoid an overwhelming number of administrations. In some situations it may be useful to administer certain measures on a continuing basis (e.g., a behavioral measure), while others might be administered far less frequently. Decisions about when to administer what sorts of measures should be guided by common sense, attentiveness to participants' rights and feelings, and the efficient use of resources.

Data Analysis[14]

A frequent question in evaluation is whether the results of the evaluation are statistically significant. Could observed effects of the program have occurred merely because of the particular sample used in the study? Are the differences so small that they might have occurred simply by chance? Statistical tests are used to answer these questions, and in order to do so these tests make certain assumptions about the data being analyzed.

To illustrate the sorts of assumptions that statisticians make about the data they analyze, we can consider levels of measurement scales. Statisticians draw distinctions between various levels of measurement, that is, data gathered from nominal, ordinal, interval, and ratio scales. Nominal scales classify information into categories without any implied order. For instance, when we categorize individuals into alcoholics, former alcoholics, and nonalcoholics, this is a nominal scale. Ordinal scales rank data in order, such as when we might rank a number of individuals according to their overall healthiness. An interval scale is one which assumes that there are equal intervals between equidistant points on a scale. To illustrate, a 10-point difference between scores of 43 and 53 on a 100-item test about the consequences of drug abuse would be considered identical to a 10-point difference between scores of 67 and 77. A ratio scale is an interval scale for which a zero point exists, such as a weight or height scale, in which there is a true zero.

When we select statistical techniques, it is important to match the statistical test with the type of data being analyzed. For example, in analyzing nominal data one must use statistical techniques specifically designed for such situations. Chi square, for instance, is one of several frequently employed nonparametric techniques for analyzing nominal data. Other nonparametric techniques are used to analyze ordinal data. A chi square test can be used to compare the actual frequencies in two or more nominal categories (such as alcoholics versus nonalcoholics) with the frequencies which might be expected by mere chance. Chi square, however, would not be a wise choice for analysis of ordinal or interval data because nonparametric tests fail to use all of the available information, hence are typically less powerful than more appropriate alternatives. Thus, one must be certain that the assumptions associated with particular statistical techniques have been satisfied.

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[14] For additional information about data analysis, see Annotated References Nos. 13, 19, 28, 33 and 35.

The following statistical procedures are ones that are used primarily with interval and ratio data, that is, data which assume equal intervals between points on the scale. Such procedures are known as parametric tests. Cognitive tests are almost always assumed to be interval scales. In addition, attitude scales, although not necessary interval scales, are often analyzed using parametric procedures under the assumptions that the points on the scale reflect equal increments of the characteristic, and that the analyses are only slightly distorted if this assumption is violated. Thus, knowledge, skill, and affective measures are frequently analyzed using the following procedures.

One of the most basic parametric procedures used is a *t* test, which is used to test the significance of the difference between two independent means. (Recall that a mean is the arithmetic average of a group of scores, computed by summing all the scores in a group, then dividing this total by the number of scores in the group.) Suppose, for example, that an evaluation were conducted to compare the effectiveness of two health education programs, and that at the conclusion of each program a knowledge measure were administered to a sample of participants. A *t* test could be used to compare the mean posttest scores of those two programs to determine if observed differences were statistically significant. If there were three or more programs being compared in this way, an analysis of variance (ANOVA) would be used.

Two other techniques, gain scores and analysis of covariance (ANCOVA), are frequently used (and, unfortunately, frequently misused) when both pre-program and posttest data are available for participants in one or more programs. Both techniques use pre-program information in an attempt to compensate for initial group differences between participants in different programs. So, for example, if an evaluator were interested in determining the degree of attitudinal or cognitive change in participants as a result of a program, the evaluator might compute a gain score (posttest score minus pretest score) as a measure of change. However, dangers associated with the use of gain scores are well documented, and such scores should not be used without considering the ways in which they may be misleading.

ANCOVA is frequently used when an evaluator wishes to compare the mean differences between two or more programs on a posttest measure (as in ANOVA), but recognizes that there may have been preexisting differences among the groups, as identified by a difference on mean pretest scores or demographic differences among groups. ANCOVA compares posttest means after an adjustment to the posttest scores has been made for these preexisting differences. Unfortunately, however, if these differences are systematic and not a function of random differences among groups, ANCOVA does not provide an adequate method for equating the groups. Hence, evaluators and program personnel need to use caution when conducting such an analysis or interpreting results from it.[15]

As one becomes more conversant with the purposes sought by various statistical analysis procedures, it is possible to consider those purposes in relationship to the levels of measurement (e.g., ordinal) required of each procedure so that a routine guide to the selection of statistical procedures is available. For example, the three general purposes of statistical analysis are description, association (correlation), and comparison (difference-testing). We can cross those purposes with the three most common types of data and secure a 3 x 3 table in which, for example, to test the differences between two sets of ordinal data we would use a nonparametric Mann-Whitney test. Such tables are found in numerous statistics texts, including several of those cited in the handbook's annotated references.

Another choice-point faced in the analysis of data concerns the appropriate *unit of analysis*. Most people are familiar with analysis procedures in which the individual participant is the unit of analysis. Yet, there are instances in which the unit of analysis treated statistically should not be the individual participant but, rather, a group of participants. The guiding principle in selecting an appropriate unit of analysis is that one should choose the smallest *independent* unit to analyze. To illustrate, suppose a health education program involved the use of peer support discussion groups of 10-12 people each in order to encourage adoption of a given health-related behavior. Because the individuals in each group would surely interact during discussions, hence not be independent, one should consider *each group's average score* to be the unit to be analyzed. Again, the focus must always be on the smallest independent unit capable of being analyzed.

Statistical tests only help us detect *statistical significance*; they do not help us determine whether an observed difference has *practical significance*. A small difference between the average scores of two groups can be statistically significant, particularly when large numbers of participants are involved, yet be of no practical consequence whatever. Health educators will need to make sensible determinations regarding whether the magnitude of an observed difference, even though statistically significant, is sufficiently important to warrant action. In other words, though evaluators of health education programs should often carry out statistical significance tests, they should not be unduly swayed by the results of such analyses. Common sense must always be applied regarding the meaning of a statistically significant result.

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[15] There are numerous statistical computer packages and programmable calculators that conduct these and many other statistical procedures for users. To optimize the ease and efficiency of data analysis efforts, evaluators should anticipate likely procedures for analyzing their data and collect data in the manner most compatible with their analysis plan and the available computer software.

Reporting Results[16]

Reporting the results of an evaluation study is a more difficult undertaking than is usually recognized. Results must be reported to decision-makers in a timely fashion. It does no good to receive an evaluation report three weeks after key program decisions needed to be made. Evaluators must also pay careful attention to the schemes they will use to disseminate their studies to all appropriate audiences. If possible, an evaluator should circulate preliminary drafts of a program evaluation to program personnel so that they can react to its accuracy and objectivity.

The decision-makers whom evaluators are assisting may have little experience with quantitative data. As a consequence, complicated statistical presentations may be of little value to them. Evaluators should select data-presentation procedures consonant with the technical sophistication of the decision-makers involved.

There is nothing wrong with simple graphs or "percentage correct" tables. If Program _Z_ participants outperformed Program _Q_ participants by 15 percent, then a bar graph representing that difference is a readily understood technique for communicating Program _Z_ participants' advantage. (In the creation of such graphic presentations, be certain that the form of the graph accurately represents the data being depicted.) The more intuitively comprehensible the data presentation techniques, the better. Program evaluators should provide straightforward presentations of data, not fear that such approaches will be regarded as too elementary. Adequate technical back-up can be appended elsewhere.

Evaluators should not be afraid of making speculations based upon their hunches about a program so long as such conjectures are identified as such. Similarly, if any of the evaluation's findings are equivocal, then the evaluator should advise concerned audiences of this. Honesty and objectivity are the hallmarks of effective evaluation reporting. In addition, since decision-makers are typically busy people, evaluators should strive for reasonable brevity in their reports. The use of executive summaries to accompany lengthy reports is a useful practice.

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[16] For additional information about reporting the results of an evaluation, see Annotated References Nos. 21 and 26.

The fundamental concern regarding reporting of results is that the whole thrust of the evaluation enterprise is to sharpen the decisions that are made. Decision-making will *not* be illuminated by incomprehensible presentations. The quality of decision-making can be enhanced only if data are understood.

Linking Measurement and Program Design

As has been stressed earlier, criterion-referenced measures are primarily useful in that they provide a clear description of what is being assessed. Those descriptions can be particularly useful to program designers and program evaluators as they attempt to create programs which focus on promoting certain attributes. To illustrate, one powerful instructional principle for promoting skills involves providing students with adequate "time-on-task." By giving students sufficient time-on-task, that is, sufficient opportunity to practice the skills sought, students can more readily attain those skills. The clarity with which a criterion-referenced measuring instrument explicates the skills that it is measuring makes it possible for program designers to organize instruction that will be congruent with the measures being employed and, thus, enhance the likelihood that program participants will acquire those skills. A health education program's designers should become intimately familiar with an intended posttest's specifications *before* they put together their program. Clearly described measures can become powerful catalysts to effective program design.

Ideally, the measures used to evaluate a program will have been deliberately constructed so that they not only assess important outcomes, but also so that they assess them in such a way that those outcomes can be promoted more effectively. Part of the challenge in evaluating health education programs is to select criterion-referenced measures which are not merely end-of-program gauges of effects. Instead, measures should be selected which function proactively to guide program designers and program evaluators as they attempt to improve the program's quality.

CHAPTER TWO

A DESCRIPTION OF THE HANDBOOK'S MEASURES

Chapters Five and Six of this handbook contain a number of program evaluation measures. These are measuring instruments which may be employed in the evaluation of health education programs. For the newly developed measuring instruments, one form of a measure is typically provided, for use with adults and older adolescents. Where appropriate, a simplified version of that measure designed for elementary grade children is also provided. In this chapter the nature of these measures is briefly described. Several types of measurement strategies not included in the handbook are also discussed.

Varieties of Assessment Instruments

There are numerous ways of classifying measuring devices. Sometimes, for example, tests are distinguished according to the way in which an examinee's responses are scored. To illustrate, we often refer to objectively scored tests such as those consisting of multiple-choice items. We also refer to subjectively scored tests such as essay examinations.

More frequently, however, measuring devices are categorized according to the type of examinee behavior that the measure is designed to elicit. One of the most commonly employed schemes for classifying measures is the three-category division of cognitive, affective, and psychomotor behaviors. A cognitive measure focuses on an examinee's intellectual behaviors. An affective measure deals with one's attitudes, interests, and predispositions. A psychomotor measure gauges one's proficiency in performing small or large muscle skills.

In reviewing the types of outcomes sought by most health education programs, four readily distinguishable categories account for the major outcomes of interest to educators. These four categories have been used in developing and categorizing this handbook's measures.

Four Categories of Measures

The four categories used to classify measures in the handbook are (1) behaviors, (2) knowledge, (3) skills, and (4) affect. It is generally held that individuals' behaviors are influenced by their knowledge, skills, and affective dispositions. Consonant with that view, when the expert panelists isolated outcomes for which measures were to be included in the handbook, they first identified potential behavioral outcomes, then attempted to isolate the knowledge, skill, and affect outcomes which would contribute to each behavioral outcome. Let's look more closely now at each of the four types of measures included in this handbook.

Behavioral Outcomes. Measures for behavioral outcomes attempt to assess the routine behavior of individuals under normal circumstances, such as whether or not individuals use alcohol responsibly or abuse specified drugs. Most health education programs strive to bring about lasting behavior changes in program participants, hence are ultimately focused on the promotion of behavioral outcomes. For example, a program designed to help alcoholics is less concerned with participants' end-of-program scores on a written test than with their actual alcohol consumption practices well after the program has ended.

There are several commonly employed data-gathering procedures used to secure information about individuals' behaviors. We can observe peoples' actual behavior (observation), ask them to tell us about that behavior (self-report), or physically monitor that behavior (physiologic indicators).

Evaluators are sometimes intuitively drawn to the virtues of observational approaches because, after all, "if we observe a behavior of interest, then we can be certain that the behavior actually took place." But, intuition aside, there are substantial difficulties with the use of observational techniques in assessing the impact of health education programs. For one thing, it is difficult and often costly to train observers so that they observe the behavior of interest with accuracy and consistency. More importantly, however, in most health settings we are interested in human behaviors that occur at various and unpredictable times over an extended period. Often these behaviors occur in private. Not only would the cost of paying for continuous observations be staggering, but it is clearly impractical (and, possibly, unethical) to observe individuals on an around-the-clock basis.

For some health-related behaviors it is possible to employ physiologic measurements in order to make inferences about the nature of individuals' behavior. A laboratory analysis of a person's blood composition can, for instance, reveal whether that individual has been consuming alcohol. Similarly, other physiologic tests can be used to detect traces of nicotine in the body, hence lead to reasonable conclusions about an individual's smoking behavior. In many instances the cost of using such physiologic measures may be prohibitive for the conduct of routine program evaluations. However, in "high stakes" evaluations, that is, significant evaluations of major impact programs, or when it is relatively easy to administer physiologic measures, evaluators will certainly wish to consider the possibility of employing such measures in lieu of or in addition to self-report or observational techniques.

As with observational techniques and physiologic measures, there are definite problems associated with the use of self-report measures as a way of identifying individuals' behaviors. Not the least of these problems is the possibility for individuals to distort their responses on self-report measures so that they do not reflect actual behavior. Yet, on balance, the use of self-report measures often offers evaluators the best practical method of securing meaningful evidence about the actual behaviors of participants. In light of these practical considerations, therefore, the handbook's newly-developed behavioral measures are all of the self-report variety. A number of recent studies suggest that self-report assessment devices can be effectively employed as supplements to physiologic measures.[1]

Knowledge outcomes. Most health education specialties have a great deal of knowledge, that is, factual information, which must be transmitted to program participants. The evaluator's task is to employ measurement devices which can effectively assess participants' abilities to recall this information. Most such tests consist of objectively-scored paper-and-pencil measures of one sort or another.

Knowledge tests typically pose a variety of questions related to the factual information being assessed. In most of these tests there is substantial ambiguity regarding what information is eligible for testing. Suppose, for example, that an instructor in a drug abuse program merely knew that there would be questions on a posttest dealing with the consequences of heroin use. There is simply no way to anticipate the enormous variety of test items which could be constructed regarding these consequences. To the extent that the program's quality is being judged, at least in part, by participants' performances on the posttest, the program's evaluation is at the mercy of an item-writer. No one except the item-writer knows for sure what is to be tested.

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[1] See, for example, Petitti, D.B., Friedman, G.D., & Kahn, W. Accuracy of information on smoking habits provided on self-administered research questionnaires. American Journal of Public Health, 1981, 711, 308-311.

To counteract this difficulty, all of the knowledge measures specially developed for this handbook consist of test items based directly on a series of statements embodying important factual information related to the content area being tested. All of the test-eligible statements are listed in the sets of test specification used to generate the test items. (See Chapter Seven) In addition, the test specifications set forth the permissible variations of these statements that can be used to create binary-choice True/False items. As a result, both the program's instructional staff and the evaluator possess an unambiguous idea of the universe of content upon which the knowledge tests will be based.

One advantage of using binary-choice test items is that an exhaustive list of all the content eligible for testing can be compiled. An additional advantage of the binary-choice approach to the assessment of knowledge is that if the program is targeted at individuals who do not possess reasonable reading skills (such as, say, limited English-speaking paricipants), the items can be read aloud to examinees with little increase in the necessary testing time. Reading aloud a series of multiple-choice or matching items would be far more cumbersome.

It is sometimes feared that the results of a binary-choice test may reflect mere chance rather than what examinees actually know, simply because examinees can correctly guess answers at a 50 percent rate. Although it may be true that guessing can play a major role with one or two True/False items, with longer tests the odds of guessing one's way toward success are slight indeed. For example, there is one chance in four that an examinee could correctly guess answers on two binary-choice items. To guess ten out of ten such items correctly, however, the odds shrink to less than one in 1,000. By using binary-choice tests that contain a sufficient number of items, for instance, tests with 20 or more items, we substantially reduce the likelihood that guessing will so influence an examinee's test score that we do not secure a reasonable estimate of that examinee's knowledge.

Because examinees will always be able to guess some items correctly on a binary-choice test, program personnel should not become too jubilant over scores that are slightly above the 50 percent correct expected by chance alone. By using reasonably long binary-choice tests, however, there usually will be more than enough variability in examinee performance to detect differences in the effectiveness of programs.

Skill outcomes. Outcomes dealing with participant skills are those which call for examinees to apply knowledge, not merely recall it. The attributes assessed in the handbook's newly-developed skill measures are all higher order cognitive skills. For example, one's ability to use alcohol responsibly would be an example of the type of skill measured by the handbook's skill measures.

These skill measures generally emphasize test items in which the examinee is asked to employ higher order cognitive processes to distinguish among choices in a variety of simulated real-life settings. All of these choices focus on health-related courses of actions that an individual might pursue. In other words, application, not recollection, has been sought in the handbook's skill measures, forcing examinees to employ skills in settings approximating those they would encounter in real life. In many instances the skill measures build directly on the knowledge measure(s) associated with outcomes most closely related to that skill.

Affective outcomes. Affective outcomes refer to the variety of non-cognitive variables, such as attitudes, interests, and values, which are thought to predispose individuals to act in a particular manner. A negative attitude toward dangerous drugs, for example, is believed to incline a person to avoid such drugs. Similarly, a positive attitude toward the virtues of using alcohol responsibly is thought to dispose a person toward proper drinking habits.

Although it is possible to infer the nature of an individual's affective status from observations of that person's behavior, the most common technique for assessing affect involves the use of self-report inventories. The manner in which the items on a self-report affective inventory are constructed yields scores which require either (1) little in the way of inferences to interpret the scores or (2) substantial inferences in interpreting the meaning of the scores. We refer to the former as low-inference self-report measures, and to the latter as high-inference self-report measures.

Low-inference self-report measures typically present respondents with a series of straightforward questions or statements such as those asking for the degree of agreement with positive and negative statements about drug abuse. Responses to such measures can be readily interpreted if respondents are telling the truth. To heighten the likelihood of securing truthful responses, those completing affective measures are often directed to return them anonymously.

High-inference self-report measures are typically designed to be less transparent in what they are attempting to measure. To illustrate, if a relationship had been found between a person's religious views and alcohol consumption, we might ask people about their attitudes regarding religion in order to get at their attitudes regarding drinking. The virtue of high-inference measures is that, because their purpose is masked, it is difficult for the respondent to provide dishonest responses or to respond in the direction deemed desirable. On the other hand, in order to interpret the results from high-inference measures, we often must make quite tenuous inferential leaps. The less obvious the purpose of the items, the less likely that individuals will respond untruthfully, but the greater the required inference.

Because of the interpretation risks associated with high-inference assessment schemes, all newly-developed measures of affect in the handbook employ low-inference strategies. These self-report affective inventories sometimes rely on Likert-type scales wherein the respondent registers varying degrees of agreement/disagreement with statements regarding the affective dimension of interest. In other instances respondents are asked to estimate whether or not they would behave in a certain way (such as drink responsibly), then are told to indicate the degree of confidence which they have in each such estimate.

In general, it is assumed that a person's knowledge, affect, and skills contribute directly to that individual's behavior. And since most health education programs are ultimately interested in modifying participants' actual behaviors, then the acquisition of appropriate knowledge, affect, and skills can be seen as potentially precursive to the attainment of desired behavior. Thus, in evaluating health education programs that have not succeeded in achieving desired behavioral changes, it is often possible to detect shortcomings in the promotion of en route outcomes dealing with knowledge, skills, or affect.

Other Indicators of Effects

As indicated earlier, this handbook does not contain observational assessment techniques or physiologic measures. It also does not treat measures of health effects which might be used to determine whether health education programs are having their desired impact. Only the previously described behavioral, knowledge, affective, and skill measures have been included. These four categories certainly do not exhaust the range of possible assessment tools that evaluators should consider when they undertake an evaluation. There are numerous other sorts of extant data and assessment strategies which should be thought of as potentially helpful.

As an illustration of the sorts of existing data that evaluators often find useful, we can think of the numerous *archival* records of relevance to health behavior, e.g., drug use incidence data, records of doctor's visits, and arrest records for driving while drunk. Such archival data can often prove illuminating in making decisions about health education programs. Evaluators must attempt to locate existing records of such phenomena if they pertain to the decisions under consideration.

To illustrate the kinds of more elaborate assessment strategies which might be used, we will briefly describe one technique designed to secure responses to sensitive questions. The randomized response technique (RRT) is an effective technique for obtaining accurate information from respondents on a small number of highly sensitive issues such as the use of illegal drugs or alcohol. By presenting respondents with both a sensitive and a nonsensitive question, and by having respondents themselves use a random procedure (such as a coin flip) to select the "to be answered" question, respondents are expected to answer the sensitive question honestly because the interviewer can not know which question is actually being answered. An example of the nonsensitive question might be "Have you attended a PTA meeting at school during the past 12 months?" The sensitive question might ask, "Have you used heroin during the past 12 months?" An accurate estimate of the number of people responding "yes" to the sensitive question (e.g., the number of people reporting heroin use) can then be computed by subtracting the likely proportion of "yes" responses to the non-sensitive question.

Another assessment strategy involves the use of respondents as "informants" who report information about relatives, friends, etc. Often these reports can be made so that the individual about whom the report is made remains anonymous. This procedure, described as the *multiplicity technique* by some and the *nominative technique* by others, is described in more detailed elsewhere.[2]

Previously-Developed Measures

In addition to the development of new measures to coincide with high priority outcomes, an extensive effort was made to identify existing high quality measures which corresponded to these outcomes. This effort included a comprehensive computer search of seven data bases, recommendations of measures from panelists and panel-identified experts, and reviews of books, articles, and instruments submitted by panelists.

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[2] Fishborne, P. *Survey techniques for studying threatening topics: A case study in the use of heroin*. Unpublished doctoral dissertation, New York University, 1980.

The computer search was conducted at the UCLA Biomedical Library using the following data bases: the Medline, ERIC (Educational Resources Information Center), Psychological Abstracts, Excerpta Medica, NIMH (National Institute of Mental Health), NCMH (National Clearinghouse for Mental Health), and SSIE (Smithsonian Science Information Exchange). In addition to input from the project panelists, area-specific experts and agencies identified during the project were sent summaries of the expert-panel meeting accompanied by a letter requesting assistance in the effort to locate existing measures and relevant publications.

Once collected, all measures were subjected to an initial content screening by an experienced reviewer. The purpose of this screening was to determine whether a measure corresponded to the panel-identified outcomes. Measures which satisfied the outcome congruence screening were then subjected to a further psychometric review. Prior to initiating the review of a measure's psychometric quality, however, the authors or agencies who developed the measure were contacted to request any available supporting documentation or relevant data about the instrument. In addition to being given an overview of the purpose of the project, authors were informed of the criteria to be used in the psychometric review in order to minimize the possibility that they might inadvertently fail to supply relevant data.

The primary criterion for inclusion in this handbook was, ultimately, degree of congruence with priority outcomes. Many measures of high quality had to be excluded because they did not possess sufficient correspondence with these outcomes to be of use to evaluators interested in assessing those outcomes. There are, in fact, several handbook outcomes for which no previously-developed measures have been included, primary because of a lack of existing measures targeted to those outcomes. Where multiple measures with adequate correspondence to given outcomes were identified, the measures included in the handbook were selected on the basis of their item quality and the extent to which the set of measures selected for an outcome represented a range of approaches to the measurement of that outcome.

Test Specifications

For each of the measures developed for the handbook a set of test specifications was created to guide in the construction of the measure. As indicated in the previous chapter, this set of specifications operationalizes the outcome statement for which the measure serves as an indicator. The test specifications for all newly-developed measures are presented in Chapter Seven.

Evaluators and program personnel should find the test specifications of substantial utility, as these documents set forth in unequivocal terms the attributes being measured. This clarification of what is assessed should permit program personnel and evaluators to target their efforts more precisely to the program outcome as operationalized by the set of specifications. While one can employ the measures without referring to the specifications, most users of the measures will be markedly benefited by studying the set of specifications for each measure to be used. Program personnel in particular may want to consult the content supplements and the descriptions associated with many of the measures when planning their program itself.

The test specifications also permit program personnel to generate additional test items, if they so desire, by following the rules for item construction which have been set forth. Additional test items may be particularly useful in conjunction with knowledge and skill outcomes, where they can be employed during the course of a program as instructional tools and to monitor participant progress. Evaluators should realize, however, that any new measures created from the test specifications will not necessarily be equivalent forms, that is, forms equal in difficulty and other psychometric aspects to the forms presented in the handbook. Performance information on both the original form and any alternate forms would have to be gathered before the equivalence of such measures could be demonstrated. Therefore evaluators should be reluctant to use alternate forms as though they are equivalent, for example, in a pretest-posttest design.

To reiterate, then, in Chapters Five, Six, and Seven will be found, respectively, the newly developed measures, the existing measures, and the specifications for the newly developed measures. All of the outcomes upon which these measures are based are presented in Chapter Four. Each chapter is introduced with a brief description of that chapter's contents and an indication of the major descriptive headings contained therein. In Chapter Three suggestions are offered for using the measures in program evaluation.

CHAPTER THREE

HOW TO USE THIS HANDBOOK

Selecting Evaluation Measures

The measures that are selected for a program evaluation should correspond, as closely as possible, to outcomes of interest and importance to program personnel or other decision-makers associated with the program (e.g., the program's sponsoring agency). In some cases the measures may correspond directly to program goals. Other measures may be selected because they correspond to outcomes of ancillary interest. For example, if a program were focused on modifying participants' health behaviors, it might also be of interest to see if attitudinal changes also resulted from the program.

The desire to have a broad understanding of the impact of the program, potentially across all four areas for which this handbook presents measures, must be balanced with the need to avoid unnecessary use of program or evaluation resources. There are likely to be many interesting things about a program that one would like to know. But answering those questions requires the time and money of the program and, most likely, the time of program participants. Because personnel and financial resources are limited, and also because participants may come to resent what they consider to be unnecessary intrusions, measures should be selected carefully. An emphasis should be placed on using those measures that are likely to have implications for improving the program in the future.

One way to use the handbook is to determine the extent to which its outcome statements coincide with a program's stated objectives. Measures for those outcomes can then be considered as possible assessment devices to use in gauging the attainment of program objectives.

Another way to use the handbook is to consider its measures as reflecting possible outcomes that might be promoted by programs. As indicated earlier, program designers can create more effective programs if they comprehend clearly the nature of the targets at which the program is aimed. Although the sets of measures included in this handbook are far from exhaustive and certainly not prescriptive in any sense, they do represent a range of possible program aspirations. Furthermore, the measures are based on outcomes deemed important by a panel of experts well acquainted with health education programs in this field.

By reviewing all of the outcome measures in the handbook, at least by reading each measure's descriptor sheet, program designers and program evaluators can increase the range of options they may wish to consider as potential program outcomes.

Administration Procedures[1]

Evaluators need not develop special sets of directions in order to administer the measures that are presented in this handbook. Directions are provided with each measure, informing respondents how to supply the requested information. Test administrators should be sure to familiarize themselves with the directions and the measure itself before administering it. They can thus provide clear and accurate information to any requests for clarification by respondents.

Test administrators, whether or not they are program personnel, should be sensitive to the potential difficulty some respondents may have in reading either the directions or the test items themselves. Test administrators should be available to assist respondents as needed. It may be useful, if there is concern about the reading ability of the respondents, to read the directions aloud so as to ensure that all respondents understand what they are to do. If there is doubt about the ability of respondents to read the items, the items themselves on most measures can also be administered orally, either to groups of participants or to individuals. Respondents should be encouraged to ask questions if they do not understand their task or any items on a measure.

As a related issue, the measures do not require respondents to supply their names. This was done to help ensure the confidentiality of responses to potentially sensitive issues. If program evaluators believe that the integrity of the data would not be compromised by asking respondents to provide their names or other personal or demographic information, such information may be requested. Alternatively, if evaluators wish to be able to link performance on one measure to performance on another, this may be accomplished by assigning a code number to every individual and having the individual use that code designation whenever providing data. Respondents may also select their own identification code (e.g., mother's maiden name) if this would help alleviate fears about preserving confidentiality. In such cases, it is important that the same code be used consistently on all measures.

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[1] For additional information about administration procedures, see Annotated References Nos. 15 and 27.

The use of anonymously completed measures highlights a general concern associated with the administration of such measures in a program evaluation context. Test administrators should strive to create conditions in which respondents are genuinely comfortable in supplying truthful answers. Too often we find program personnel administering evaluation devices under circumstances which create subtle pressures for participants to respond in a manner satisfying to program staff. An effective evaluation, however, is based on honest responses, not socially desirable ones. Thus, all aspects of measure administration should be conducted with careful attention to the possible impact on participants' responses. For example, an external person rather than a member of the project staff could administer measures. Responses could also be collected anonymously, then placed in sealed envelopes in plain view of all participants. Other such techniques might be devised in order to elicit honest responses. Additional considerations related to possible response bias will be discussed later in this chapter.

Scoring

Scoring keys are provided for all newly-developed knowledge, skill, and affective measures, as well as for all existing measures which had such information available. A more complete justification of the proposed scoring scheme associated with each newly-developed affective measure is also presented in its corresponding test specifications.

As a general rule, knowledge and skill measures are scored by computing the total number of correct responses. Affective measures are scored by computing the average response for a given measure. This procedure for affective measures simplifies interpretation of the obtained score (e.g., a respondent would obtain a score of 4.2 on a 5-point scale, rather than obtaining a score of, for example, 46 out of 55 points). It also reduces confusion in dealing with omitted responses.

On the newly-developed measures, higher scores are better. That is, higher scores on the cognitive measures (knowledge and skills) indicate that the respondents answered more items correctly. High scores on the affective measures indicate attitudes consistent with those promoted by the program (as set forth in the outcome description). A specific scoring key is not provided for behavioral measures, where it should be clear from the items themselves what the desired behavioral change should be.

In addition to considering performance of respondents on the total measure, items on some of the newly-developed affective measures are categorized to permit consideration of the different dimensions in the measure. Hence, part scores as well as total scores can be computed to provide a more in-depth analysis of participants' responses. Similarly, an analysis of incorrect responses is provided on selected skill measures to assist program personnel in determining the kinds of incorrect answers (distractors) that have been selected by examinees. By considering not only whether items were answered correctly, but also by looking for patterns in the incorrect responses, program personnel can often target the program towards reducing common misconceptions. Thus, by using the incorrect response analyses, program personnel may be able to infer why specific incorrect options were selected and also enhance program participants' understanding of the correct response by describing to them the flaws in frequently selected incorrect responses.

Missing data. One of the most frequent sources of confusion in scoring measures stems from the treatment of missing data. For purposes of this discussion we shall consider two types of missing data. The first type of missing data arises when a respondent does not answer certain items on a measure. The second type of missing data occurs when a respondent does not return a measure at all.

In the former case, suppose a respondent omits one or more items on a measure. Should the scorer infer that the respondent didn't read the item, didn't know the answer, or didn't understand the question? The way missing data are treated depends on the type of measure (cognitive, affective, or behavioral), the scoring procedures being used, and the judgment of the person responsible for data analysis. As a general guideline, one should try to treat missing data in a manner consonant with the most plausible assumption about why the data were omitted. A few examples may illustrate.

Blanks or omitted responses are often treated as incorrect responses for cognitive measures (i.e., those assessing knowledge and skill). Respondents' scores are then the sum of the correct responses, under the assumption that respondents would have marked an answer if they felt they knew it. If there are other more plausible assumptions about why a response was omitted, such as confusion about what the question was asking, this approach might not be advised. In that case, evaluators might consider missing and incorrect responses separately, thus creating a slight increase in the complexity of the analysis procedure.

The best procedure for dealing with missing affective responses should, again, be consistent with the general guideline of selecting the procedure that requires the fewest unsubstantiated assumptions about the missing responses. Consider the case in which respondents are asked to indicate the extent of their agreement with a series of statements on, for example, a 5-point Likert scale. Because a score on this measure is obtained by averaging the responses, missing data can usually be ignored, and the respondent's score can be computed based on the items for which there are responses. This assumes that the responses to the unanswered questions are, on average, the same as the responses to the questions that were answered. A different approach may be used if this assumption seems unwarranted. For example, if all the items of a particular type are omitted, it may be unwise to assume that the answers to those items would be the same as the answers to all the other items. In this case,. the entire measure may have to be excluded from the analysis.

In affective measures on which respondents are required to estimate their confidence regarding a series of statements, similar procedures for treating missing responses can be used. Hence, in contrast to cognitive measures, respondents are typically not penalized for omitting responses on an affective measure.

There are no particularly useful procedures for dealing with missing data on behavioral measures that require respondents to answer a series of independent questions to describe their participation in health related activities. Each measure may need to be considered as a whole, with the evaluator or program personnel making an overall decision about whether the respondent engaged in adequately healthful activities or not. To the extent that the questions tap independent behaviors, there is no way to infer what the response to one item may be on the basis of responses to other items. For example, if an individual reports never using heroin during the preceding month, there is no way of knowing whether that person had used marijuana. Hence, decisions regarding missing data on behavioral measures must be made on a more individual basis. It is important, however, to employ consistent decision rules when dealing with any missing data.

The problem of how to deal with missing data when certain participants complete no items on selected measures is a more difficult one than the problem just addressed. That is, what can be done if, because the respondent either refused or was unavailable to complete the measure, we have no data at all regarding a given participant's status on a given outcome? The answer to this question depends on the data-gathering design that is being used and on the most likely reasons that the data were not obtained.

One of the more frequent contexts in which this problem arises is when a pretest-posttest design is used. In this design, measures are administered to program participants prior to beginning the program and, again, at the conclusion of the program. Observed changes between pretest and posttest scores are attributed to the impact of the program. But suppose that some participants do not complete the program and, therefore, are unavailable to complete the posttest questionnaires. Differences between the participants' average pretest scores and their posttest scores may come from systematic differences between the individuals who took the pretest and the individuals who completed the program, hence took the posttest. For example, suppose that, even before a program began, some participants had strong intentions to behave in a healthful way. Others did not. Now, suppose that a disproportionate number of those respondents who did not intend to behave in a healthful way dropped out of the program. If we considered the posttest responses of only those participants who remained in the program for its entire duration, while also considering the pretest responses of all the original participants, we would find that the posttest scores indicated stronger intentions to behave in a healthful way than pretest scores, even if the program had no effect on participants' intentions. This situation would arise because of the elimination of a disproportionate number of respondents who did not intend to change their behavior. Thus, observed changes might be due to differences in respondent characteristics rather than program impact.

To safeguard against this possibility, evaluators must be attentive to the characteristics of respondents, particularly when data at different points in time are compared. In the preceding example, it might be advisable to exclude the pretest data of those participants who did not provide posttest data, and to compute pretest and posttest means on the basis of those individuals for whom complete data exist. To do this would, of course, require using some unique and consistent identification code on all measures completed by each participant so that one could know whose pretest responses should be excluded. If it is necessary to eliminate a particular category of respondents from the analysis, one should be aware of the limitations this imposes on the ability to generalize the findings from the remaining respondents to the broader group of eligible participants. That is, in the preceding example we should only describe the effects of the program on participants who already intended to make the desired behavioral change (remember that a disproportionate number of other participants left the program), not on any person who might consider enrolling in this particular health education program.

The key issue in deciding what to do when individuals or groups of individuals fail to return selected measures is to determine the extent to which the non-respondents differ in any systematic way from the respondents. Are non-respondents less motivated initially? Do they vary on any major demographic variables, such as sex, ethnicity, or previous education? Are they more knowledgeable about the given health area than those who completed the measures? If the answer to any of these questions is yes, then it is important not to compare all pretest responses with all posttest responses. If, however, there appear to be no systematic differences between those respondents for whom complete data are available and those who did not return all measures, then it may be acceptable to consider all available data. This might be the case if, for example, several participants were sick on the day posttest measures were administered, but the absent respondents did not differ systematically from the other participants. Thus, the degree of attention to this type of missing data depends on the extent to which there is reason to suspect a systematic bias in the findings as a result of the missing information. At the very least, an evaluator should describe the characteristics of the participants who completed the measures at each administration period, so that those using the evaluation report can consider for themselves whether the assumptions guiding the treatment of missing data appear to be justified.

Interpreting Responses

It would be comforting to assume that the data, once collected and analyzed, provide accurate accounts of the respondents' cognitive, affective, and behavioral status. Unfortunately, however, there are many instances in which one cannot be certain that the inferences made from the data are fully justified. For example, in the cognitive areas we assume that the more items correctly answered by an individual, the more that the individual knows about the outcome being tested. But it is also possible, although in this case perhaps unlikely, that some respondents who were highly knowledgeable about the information being tested did not get a high score because they couldn't understand some of the items or had a hard time reading the test. It is the test developer's responsibility to try to reduce such confusion by, for example, ensuring that the items are written as simply as possible and that there are no extraneous sources of difficulty. It is the test user's responsibility to remember that there will inevitably be the potential for some confusion, and to interpret the measures in light of this potential.

This problem is probably more apparent in interpreting affective and behavioral measures. It has been well-documented that there are "response sets" or systematic sources of bias in responses to such measures. To illustrate, one of the best known response sets is social desirability, or the tendency of individuals to provide responses which are consistent with what they believe to be expected of them. So, for example, individuals might indicate that they intend to refrain from using alcohol or drugs because they believe that it is "appropriate" for them to do so, rather than because they actually have that intention. There is little that one can do to preclude completely the possibility of such response sets. To reduce at least somewhat the likelihood of response sets, evaluators can avoid language which clearly indicates the desired response, preserve the anonymity of respondents, and ensure respondents that the evaluation is more concerned with understanding the program than with describing selected participants. An atmosphere in which honesty rather than "proper behavior" is promoted is definitely conducive to obtaining accurate responses in sensitive areas.

This problem is, perhaps, even more pronounced in behavioral self-report measures, where respondents may misrepresent their behavior. Respondents may be reluctant to admit that they drink heavily or use illegal drugs. Although the measures have been developed to encourage accurate responses, it is the responsibility of program personnel and evaluators to do all that they can to promote accurate responses and to minimize the threat of repercussions should individuals behave in undesirable ways. Guaranteeing anonymity is one common procedure, but establishing credibility with respondents is also critical. In addition, observation, physiologic measurement, and procedures such as the randomized response technique may be used to verify the accuracy of behavioral self-reports.

The problem is not as overwhelming as it may sound. Clearly, whenever one must rely on self-report data there is the possibility of inaccurate responses. But careful measure development can reduce the degree of perceived threat in the measures and this can promote honesty. Furthermore, program personnel can help allay the anxiety of respondents so as to increase honesty of responses. Corroboration, or the threat of corroboration, by an external source can reduce the likelihood that respondents will bias their responses. In addition, many designs compare responses at one point in time to responses at another, or compare different groups of respondents to each other. In these comparative designs, whatever systematic bias there is may be found at all measurement times and, hence, may not influence indices of change. Finally, by being aware that such problems may exist, those who use evaluation measures can encourage caution in interpreting evaluation findings and urge verification of data where it is warranted.

Enriching Evaluations

This handbook provides measures that may be useful in assessing a program's outcomes. Typically, a health educator might select not merely one but several measures to use in a program evaluation. Multiple outcome measures can markedly enhance the quality of an evaluation.

Although the outcomes measured in the handbook have been deemed important, they may not coincide directly with the outcomes of interest to any given program. And they certainly do not exhaust the issues that may be of interest to those individuals involved in a program. Program evaluators and personnel should not limit their data-gathering efforts to the measures provided in this handbook. Rather they should supplement these measures with others that more directly address the particulars of the evaluation settings in which they find themselves.

The emphases of any supplementary evaluation activities should coincide with the information needs and interests of those concerned with the program. Probably the most useful information elicits ways to enhance the effectiveness of the program, either as it has already been implemented or as it will be carried out in similar programs planned for the future. For example, questionnaires may be administered to program participants asking them to identify any follow-up support or information they might need in order to continue to refrain from heavy drinking or drug abuse. Participants might also be able to provide specific suggestions for improvement of the program should it be offered to others.

It is impossible to isolate all the information that might be useful to gather for an evaluation. But the following point cannot be overstated: *Evaluations should focus on the systematic collection of data that can be used to improve the quality of health education programs* and, in turn, the physical and psychological well-being of participants and of the community at large. Evaluation should not be conducted for the sake of evaluation but should be viewed as a tool to enhance the effectiveness of health education programs. It can only fulfill this promise if those guiding the evaluative efforts direct evaluation resources with this goal in mind, and if they use their resources wisely. The measures that comprise the majority of this handbook should provide a solid foundation for effective evaluation efforts. But program personnel and evaluators in the field must structure evaluations to serve the needs of those with a stake in the findings, and their professional insights are likely to be the best guide possible.

Using Unproven Measures

In the remainder of this handbook there are numerous measures available for use by evaluators of health education programs. The measures developed specifically for this project, as well as some of the already existing measures included here, share one substantial shortcoming. They have not been subjected to rigorous empirical investigations to ascertain their psychometric qualities, especially their reliability and validity. When using such measures, how should program evaluators proceed? The answer is all too clear--with great caution.

Although all of the measures included in the handbook were developed with substantial care, until there have been reliability and validity studies carried out which verify those measures' technical adequacy, they should be employed with substantial care. To illustrate, in the absence of reliability and validity data, one should be most reluctant to draw inferences about the meaningfulness of an individual's score on particular measures.

In using measures for purposes of program evaluation, we often aggregate results for a group of participants rather than try to work with individual participants' responses. By using the pooled responses of many individuals, we can have more confidence in the average of the group since anomalous scores will either tend to cancel each other out or be outweighed by the total set of responses. Even with such aggregated scores, however, care is warranted when using measures whose reliability and validity have not been empirically confirmed.

The general caveat regarding the use of measures which have not yet been subjected to empirical analysis is for program evaluators to proceed very carefully in employing such assessment instruments. The new measures that are included in Chapter Five of the handbook were developed with great care, employing a variety of internal and external review procedures to assure that their content and form was appropriate. Yet, although one can have confidence that the process used in their development was systematic and thoughtful, the opportunity to subject those measures to empirical verification has not yet arisen. Such an appraisal of the new measures' technical adequacy is planned for the future. It is likely that the handbook's measures may be superior to the hastily created measures seen so often in the evaluation of health education programs. Nonetheless, evaluators of health education programs should regard the handbook's measures as a resource to be used--but to be used with prudence.

CHAPTER FOUR

PROGRAM OUTCOME STATEMENTS

The outcomes presented in this chapter are program evaluation goals identified by a panel of subject matter and health education experts selected as advisors for this project. The panelists identified two major behavioral outcomes, namely, the responsible use of alcoholic beverages and refraining from the use of alcohol and/or drugs. Knowledge, skill, and affective outcomes considered likely to predispose individuals to adopt these target behaviors were also selected. The process by which these outcomes were isolated and put in priority order is explained more completely in the Preface to the handbook.

This chapter's program outcome statements have guided the development of the rest of the handbook. Chapter Five presents newly-developed measures designed to assess each outcome. Chapter Six contains previously-developed measures selected for their congruence with the outcome statements. Chapter Seven consists of test specifications for all the newly-developed measures. These specifications define the outcomes, describing the precise nature of each one.

The outcome statements that follow are relatively brief definitions of a particular behavior, knowledge, skill, or attitude considered important for alcohol and substance abuse health education programs. The title of each outcome statement is used throughout the handbook to reference the measures corresponding to it. As a further aid to handbook users, the outcome statements presented in this chapter are accompanied by the titles of the measures that correspond to each one. The target population for each measure is also noted. Handbook users can locate the measures for each outcome on the page specified.

BEHAVIORAL OUTCOMES

RESPONSIBLE USE OF ALCOHOLIC BEVERAGES

Individuals engage in moderate, controlled intake of alcoholic beverages by avoiding consumption patterns that could inconvenience or endanger themselves or others.

Drinking Effects . . . . page 5

Target population: Adults or Adolescents

Michigan Alcoholism Screening Test (MAST) . . . . . page 1

Target population: Adults or Adolescents

The Modified MAST . . . . page 1

Target population: Adults or Adolescents

The Index of Uncontrolled Drinking . . . . page 1

Target population: Adults or Adolescents

Student Alcohol Behavior Questionnaire . . . . page 1

Target population: Adults or Adolescents

REFRAINING FROM THE USE OF ALCOHOL AND/OR DRUGS

Individuals who never have consumed alcoholic beverages or illegal or non-medically indicated drugs continue to refrain from consuming such substances; individuals stop consuming alcoholic beverages or illegal or non-medically indicated drugs.

Substance Survey . . . . page 6

Target population: Adults or Adolescents

Do You Use These? . . . . page 6

Target population: Elementary school children

Current Drug Usage Questionnaire . . . . page

Target population: Adults or Adolescents

Drug Use Checklist . . . . page

Target population: Age 9 to Adult

KNOWLEDGE OUTCOMES

CONSEQUENCES OF ALCOHOL AND DRUG USE

Individuals can accurately recall information about the physical, psychological, and social consequences related to the use of alcohol and specific drugs.

Consequences of Alcohol Use . . . . page 64

Target population: Adults or Adolescents

Consequences of Drug Use . . . . page 68

Target population: Adults or Adolescents

Facts About Alcohol and Drug Use . . . . page 73

Target population: Elementary school children

Student Alcohol Knowledge Questionnaire . . . . . . page 170

Target population: Adults or Adolescents

Pennsylvania State Drug Knowledge Scale . . . . . . page 173

Target population: Adults or Adolescents

DANGER SIGNS AND VARIABLES LEADING TO ALCOHOLISM OR SUBSTANCE ABUSE

Individuals can accurately recall information about the physical, psychological, behavioral, and social signs indicative of alcoholism or substance abuse. Individuals can also accurately recall information about the physical, psychological, and social variables that may lead to excessive consumption of alcoholic beverages or to substance abuse.

Causes and Signs of Alcoholism . . . . page 77

Target population: Adults or adolescents

Overdose Treatment Questionnaire . . . . page 182

Target population: Adults or Adolescents

SKILL OUTCOMES

TECHNIQUES OF RESPONSIBLE ALCOHOL USE

Individuals can select courses of action consonant with the responsible use of alcohol.

Using Alcohol Responsibly . . . . page 8

Target population: Adults or Adolescents

Hypothetical Case Histories . . . . page 1

Target population: Adults or Adolescents

ASSERTIVENESS IN RELATION TO DRINKING

Individuals can use assertiveness techniques in resisting peer pressure to drink and in asking others to help them stop or reduce their drinking.

Drinking and Assertiveness . . . . page 8

Target population: Adults or Adolescents

INTERPERSONAL RELATIONSHIPS: EFFECTIVE COMMUNICATION TECHNIQUES

Individuals can interact effectively with significant others in their lives. The nature of these interpersonal relationships will be such that individuals respond with understanding and acceptance to the messages of others in health-related situations.

Communicating About Drinking . . . . page 9

Target population: Adults or Adolescents

Talking About Drinking . . . . page 1

Target population: Elementary school children

INTERPERSONAL RELATIONSHIPS: EFFECTIVE RESPONSE TECHNIQUES

Individuals can interact effectively with significant others in their lives. The nature of these interpersonal relationships will be such that individuals respond with understanding and acceptance to the messages of others in health-related situations.

Responding to Others About Drinking . . . . page 109

Target population: Adults or Adolescents

AFFECTIVE OUTCOMES

PERCEIVED CONSEQUENCES OF ALCOHOL AND SUBSTANCE ABUSE

Individuals believe that there are negative consequences associated with using drugs or large amounts of alcohol.

How Much Do They Matter? . . . . page 117

Target population: Adults or Adolescents

Do They Matter? . . . . page 122

Target population: Elementary school children

OPENNESS TO ALTERNATIVES

Individuals express a willingness to try a variety of different techniques for managing their emotional needs and coping with the various internal and external pressures that commonly promote the use or abuse of alcoholic beverages and drugs.

Ways of Coping . . . . page 126

Target population: Adults or Adolescents

Different Choices . . . . page 132

Target population: Elementary school children

PERCEIVED ABILITY TO CONSUME ALCOHOL RESPONSIBLY

Individuals believe that they can engage in moderate, controlled intake of alcoholic beverages by avoiding consumption patterns that could inconvenience or endanger themselves or others.

Have a Drink? . . . . page 137

Target population: Adults or Adolescents

INTENTION TO REFRAIN FROM USING ALCOHOLIC BEVERAGES AND/OR DRUGS

Individuals believe that they will abstain from using alcoholic beverages and/or drugs.

Would You? . . . . page 14

Target population: Adults or Adolescents

What Would You Do? . . . . page 14

Target population: Elementary school children

Future Drug Usage Questionnaire . . . . page 1

Target population: Adults or Adolescents

Tentative Drug Use Scale . . . . page 2

Target population: Adults or Adolescents

RESPECT FOR ONE'S BODY

Individuals believe that they are willing to engage in those activities that are indicative of a respect for their body and the need to take care of it.

My Body . . . . page 1

Target population: Elementary school children

CHAPTER FIVE

MEASURES DEVELOPED FOR THIS PROJECT

This chapter contains all of the measures that have been newly developed to correspond to the program outcome statements listed in Chapter Four. The measures are presented in the same order as the outcome statements, that is, behavioral measures followed by measures of knowledge, skill, and affect. The adult/adolescent version of each measure is presented first. In those instances where a children's measure has also been developed for an outcome, that measure follows immediately after the adult form.

A descriptor page precedes each measure. This page indicates the *type of measure* (behavioral, knowledge, skill, or affective), the title of the *outcome assessed*, and the *target population* for the instrument. A *general description* is presented, providing an overview of the assessment strategy employed in the measure. Finally, the pages in the handbook where the test specifications for the measure can be found are also cited.

All of the measures in this chapter have been readied for possible photocopying, with directions to respondents printed at the top of the first page of each instrument. Scoring instructions follow all knowledge, skill, and affective measures.

Before selecting any measures from this chapter, the following caution should be observed. In order to evaluate health education programs dealing with alcohol and substance abuse, it is often necessary to ask respondents about their own use of alcohol and drugs or about their views regarding such use. Although measuring instruments which include such questions in no way signify approval of drug use or alcohol consumption, those who are considering the use of these measures should recognize that some individuals, for example, parents of children who complete the measure, may believe that a measure implicitly sanctions the use of alcohol or drugs. Accordingly, such measures should not be employed indiscriminately, but with attentiveness to the way in which they will be viewed by others.

DRINKING EFFECTS

TYPE OF MEASURE: Behavioral

OUTCOME ASSESSED: Responsible Use of Alcoholic Beverages

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

Individuals are asked to indicate how often during the preceding month they have experienced a variety of circumstances indicative of irresponsible use of alcohol. This information can be used as a measure of the extent to which respondents have avoided consumption patterns that could inconvenience or endanger themselves or others.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 203-204.

DRINKING EFFECTS

Answer the following questions by indicating how often, if ever, an event has happened during the past MONTH. Circle the appropriate letter to left of each question.

A = Never
B = Once
C = More than once

Do not put your name on this survey. Your responses are strictly confidential.

Never	Once	More than Once		
A	B	C	1.	Has your speech become fuzzy or slurred while drinking?
A	B	C	2.	Have you failed to keep a promise you made while you were drinking?
A	B	C	3.	Have you driven a car after having more than two drinks?
A	B	C	4.	Have you been nauseated while drinking?
A	B	C	5.	Have you had a hangover the morning after drinking?
A	B	C	6.	Have you missed a day of work or school because of drinking?
A	B	C	7.	Have you lost consciousness while drinking?
A	B	C	8.	Have you forgotten things you did while drinking?
A	B	C	9.	Have you had the "shakes" the morning after drinking?
A	B	C	10.	Have you been late for work or school because of drinking?

Drinking Effects
Page 2

Never	Once	More than Once		
A	B	C	11.	Have you physically hurt yourself or others while drinking?
A	B	C	12.	Have you regretted things you said or did while drinking?
A	B	C	13.	Have you experienced a loss of control while drinking?
A	B	C	14.	Have you been drunk in front of children?
A	B	C	15.	Have you been drunk continuously for several days at a time?
A	B	C	16.	Has your vision become blurred or double while drinking?
A	B	C	17.	Have you had problems with your family or friends because of your drinking?
A	B	C	18.	Have you ignored a doctor's advice not to drink?
A	B	C	19.	Have you been drunk at work or school?
A	B	C	20.	Have you damaged any property while drinking?

INSTRUCTIONS FOR SCORING
DRINKING EFFECTS

Point values are assigned to responses according to the following scoring key:

A = 2 points
B = 1 point
C = 0 points

This inventory can be scored by adding the point value of every response and dividing this sum by the number of responses. The maximum score attainable of 2 points indicates that there were no instances of irresponsible use of alcohol as defined by the survey.

SUBSTANCE SURVEY

TYPE OF MEASURE: Behavioral

OUTCOME ASSESSED: Refraining from the Use of Alcohol and/or Drugs

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

Individuals are asked about their current use of alcoholic beverages and specific drugs to determine how often they currently consume these substances. This information can be used as a measure of how effectively a program has aided participants in abstaining from the use of these substances.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 205-207.

SUBSTANCE SURVEY

Various substances are listed below. For each one, place a check (√) in the appropriate column to show how often during the past month you have used the substance. Do not count any times you have used a substance with a doctor's prescription. If you do not know if you have used a particular substance, place a check in the NOT SURE column.

Please do not put your name on this survey. Your responses are strictly confidential.

HOW OFTEN DURING THE PAST MONTH HAVE YOU USED THE SUBSTANCE?

SUBSTANCE	NOT AT ALL	ONCE A MONTH	2-3 TIMES A MONTH	ONCE A WEEK	2-3 TIMES A WEEK	4-6 TIMES A WEEK	DAILY	NOT SURE
BEER or WINE								
HARD LIQUOR (Vodka, Gin, Whiskey)								
MARIJUANA (Grass, Hashish)								
PSYCHEDELICS (LSD, PCP, Peyote)								
AMPHETAMINES (Speed, Bennies)								
BARBITURATES (Downers, Sleeping Pills)								
INHALANTS (Glue, Paint Thinner)								
COCAINE (Coke)								
OPIATES (Heroin, Opium, Methadone								

DO YOU USE THESE?

TYPE OF MEASURE:	Behavioral
OUTCOME ASSESSED:	Refraining from the Use of Alcohol and/or Drugs
TARGET POPULATION:	Elementary school children

GENERAL DESCRIPTION:

Children are asked about their current use of alcoholic beverages and specific drugs to determine how often they currently consume these substances. This information can be used as a measure of how effectively a program ha aided participants in abstaining from these substances.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 208-209.

DO YOU USE THESE?

Have you used any of the things listed below? Use a check to show how often, if at all, you have used each one during the past MONTH. If you do not know, put a check in the NOT SURE space.

Do not put your name on this paper. Your answers will be a secret.

	NOT AT ALL	ONCE A MONTH	2-3 TIMES A MONTH	ONCE A WEEK OR MORE	NOT SURE
BEER					
WINE (except for religious use)					
HARD LIQUOR					
MARIJUANA					
HASHISH					
LSD					
PCP					
SPEED (amphetamines)					
DOWNERS (barbiturates)					
GLUE					
COCAINE					
HEROIN					

CONSEQUENCES OF ALCOHOL USE

TYPE OF MEASURE: Knowledge

OUTCOME ASSESSED: Consequences of Alcohol and Drug Use*

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

Individuals are presented with statements about physical, psychological, and social consequences of alcohol use. Individuals indicate whether each statement is true or false.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 210-219.

*Only the alcohol portion of this outcome is measured by this test.

CONSEQUENCES OF ALCOHOL USE

This test consists of 20 statements about the effects of alcohol. Some of the statements are true and some are false. If you think a statement is true, put a check in the column labeled TRUE. If you think a statement is false, put a check in the column labeled FALSE.

TRUE FALSE

____ ____ 1. A person's level of intoxication depends on how much alcohol that person drinks within a given period of time.

____ ____ 2. Heavy drinkers usually realize that they have a drinking problem.

____ ____ 3. Many male alcoholics lose facial hair as a result of lowered testosterone levels.

____ ____ 4. Intoxication increases the force of the pumping action of the heart.

____ ____ 5. People usually pass out at a blood alcohol level of 0.20%.

____ ____ 6. A person's alcohol tolerance increases with occasional drinking.

____ ____ 7. Alcoholics are less likely than non-alcoholics to survive after developing cancer.

____ ____ 8. Alcohol is more likely to affect the nervous system of an individual who is in good muscular condition.

____ ____ 9. Hypertension is associated with regular heavy drinking.

____ ____ 10. A blood alcohol level of 0.02% usually indicates intoxication.

TRUE FALSE

____ ____ 11. Caffeine does not affect the body's rate of alcohol metabolism.

____ ____ 12. Alcohol can cause bleeding sores in the stomach.

____ ____ 13. Heavy drinkers often feel proud of their drinking behavior.

____ ____ 14. Alcohol usage contributes to slightly more than 75% of all traffic accidents each year.

____ ____ 15. A woman who drinks during her pregnancy increases her risk of having a baby that suffers from birth defects.

____ ____ 16. Approximately 90% of all regular heavy drinkers suffer from liver problems.

____ ____ 17. Alcohol is high in calories.

____ ____ 18. Any food, and especially milk, fats, and meat, will speed up the absorption of alcohol into the blood stream.

____ ____ 19. If alcohol is present, the body will use it for fuel.

____ ____ 20. The national alcoholism problem costs the United States about 50 billion dollars per year.

SCORING KEY
CONSEQUENCES OF ALCOHOL USE

Item	Answer
1	T
2	F
3	T
4	F
5	F
6	F
7	T
8	F
9	T
10	F
11	T
12	T
13	F
14	F
15	T
16	F
17	T
18	F
19	T
20	T

CONSEQUENCES OF DRUG USE

TYPE OF MEASURE: Knowledge

OUTCOME ASSESSED: Consequences of Alcohol and Drug Use*

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

Individuals are presented with statements about physical and psychological consequences related to the use of marijuana, hallucinogens, depressants, stimulants and narcotics. Individuals indicate whether each statement is true or false.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 220-233.

*Only the drug portion of this outcome is measured by this test.

CONSEQUENCES OF DRUG USE

This test consists of 30 statements about the consequences of drug use. Some of the statements are true and some are false. If you think a statement is true, put a check in the column labeled TRUE. If you think a statement is false, put a check in the column labeled FALSE.

TRUE FALSE

____ ____ 1. Moderate marijuana use causes permanent physical damage.

____ ____ 2. The effects of marijuana vary with the amount and strength of the dose used.

____ ____ 3. The effects of marijuana are more powerful than the effects of hashish.

____ ____ 4. The effects of marijuana are stronger when it is eaten than when it is smoked.

____ ____ 5. Psychological dependence on marijuana may result from regular heavy use of the drug.

____ ____ 6. Drivers make make errors when they are under the influence of marijuana because of their decreased ability to judge distance.

____ ____ 7. Hallucinogens are physically addicting.

____ ____ 8. Mescaline is a common hallucinogen.

____ ____ 9. Hallucinogens may cause increased heart rate.

____ ____ 10. The effects of hallucinogens are the same each time the drug is used.

____ ____ 11. PCP can cause permanent mental disorders.

____ ____ 12. The effects of hallucinogens are strongly influenced by the user's environment.

TRUE	FALSE		
___	___	13.	Depressant drugs taken in higher than prescribed doses do not cause physical dependence.
___	___	14.	Untreated withdrawal from physical addiction to depressant drugs can cause death.
___	___	15.	Doctors often prescribe barbiturates to bring on sleep.
___	___	16.	Physical dependence on barbiturates is as severe as a user's dependence on heroin.
___	___	17.	Depressant drugs bring on "normal" slee
___	___	18.	Major tranquilizers are used to treat mental disorders.
___	___	19.	Caffeine slows down the body's metaboli of food.
___	___	20.	Regular use of cocaine can result in a strong psychological dependence on th drug.
___	___	21.	Amphetamine users may experience heart problems as a side effect of amphetami drug use.
___	___	22.	Amphetamines usually increase an individual's problem solving abilities.
___	___	23.	Nicotine decreases the blood pressure.
___	___	24.	People who use amphetamines for weight control often become psychologically dependent on the drug.
___	___	25.	Marijuana is classified chemically as a narcotic drug.
___	___	26.	Regular use of heroin results in physi dependence on the drug.

TRUE	FALSE		
____	____	27.	Even if a woman is addicted to heroin while pregnant, her baby has little chance of being born addicted to the drug.
____	____	28.	Narcotic drugs excite the central nervous system.
____	____	29.	Heroin addicts often suffer from poor nutrition.
____	____	30.	Heroin use is dangerous because of the physical effects of the drug.

SCORING KEY
CONSEQUENCES OF DRUG USE

Item	Answer
1	F
2	T
3	F
4	F
5	T
6	T
7	F
8	T
9	T
10	F
11	F
12	T
13	F
14	T
15	T
16	T
17	F
18	T
19	F
20	T
21	T
22	F
23	F
24	T
25	F
26	T
27	F
28	F
29	T
30	F

FACTS ABOUT ALCOHOL AND DRUG USE

TYPE OF MEASURE: Knowledge

OUTCOME ASSESSED: Consequences of Alcohol and Drug Use

TARGET POPULATION: Elementary school children

GENERAL DESCRIPTION:

Children are presented with statements about physical, psychological, and social consequences of the use of alcohol, marijuana, inhalants, hallucinogens, depressants, stimulants, and narcotics. Children indicate whether each statement is true or false.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 234-245.

FACTS ABOUT ALCOHOL AND DRUG USE

This test has 20 sentences. Read each one. If the sentence is true, put a check under the word TRUE. If the sentence is false, put a check under the word FALSE.

TRUE FALSE

____ ____ 1. Alcohol has most of the nutrients needed for growth and health.

____ ____ 2. A person who is drunk may have difficulty making decisions.

____ ____ 3. People who drink too much hurt their families.

____ ____ 4. Marijuana makes it easier to remember things.

____ ____ 5. Hashish usually has stronger effects on a person than marijuana.

____ ____ 6. Many of the effects of marijuana on growing people are still not known.

____ ____ 7. People who sniff inhalants may have trouble keeping their balance.

____ ____ 8. Regular heavy use of inhalants may damage the brain.

____ ____ 9. The effects of hallucinogens are the same each time the drug is taken.

____ ____ 10. Hallucinogens change the way people see things.

____ ____ 11. People who use hallucinogens are always in control of their sense of time.

____ ____ 12. People who use a lot of depressants should see their doctor before they stop taking the drugs.

TRUE FALSE

___ ___ 13. More than two-thirds of all drug deaths are caused by depressant drugs.

___ ___ 14. People who use a lot of depressant drugs will develop a physical need to continue taking the drug.

___ ___ 15. People who use stimulants heavily must take more and more of the drugs to feel the same thing.

___ ___ 16. Stimulants make people feel hungry.

___ ___ 17. When the effects of a stimulant wear off, a person usually feels quite happy.

___ ___ 18. A person who often uses narcotics needs more and more of the drug to feel its effects.

___ ___ 19. Taking too much narcotics almost never causes death.

___ ___ 20. Narcotics speed up a person's heart rate.

SCORING KEY
FACTS ABOUT ALCOHOL AND DRUG USE

Item	Answer
1	F
2	T
3	T
4	F
5	F
6	T
7	T
8	T
9	F
10	T
11	F
12	T
13	F
14	T
15	T
16	F
17	F
18	T
19	F
20	T

CAUSES AND SIGNS OF ALCOHOLISM

TYPE OF MEASURE: Knowledge

OUTCOME ASSESSED: Danger Signs and Variables Leading to Alcoholism or Substance Abuse*

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

Individuals are presented with statements about physical, psychological, social, and behavioral symptoms and causal factors of alcoholism. Individuals indicate whether each statement is true or false.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 246-252.

*Only the alcohol portion of this outcome is measured by this test.

CAUSES AND SIGNS OF ALCOHOLISM

This test consists of 20 statements about the causes and signs of alcoholism. Some of the statements are true and some are false. If you think a statement is true, put a check in the column labeled TRUE. If you think a statement is false, put a check in the column labeled FALSE.

TRUE	FALSE		
____	____	1.	Individuals with a drinking problem rarely have temporary memory losses after drinking.
____	____	2.	Experts believe that because alcoholic parents set an example of heavy drinking, children of alcoholics drink more heavily than other children.
____	____	3.	Individuals with a drinking problem may drink alcoholic beverages to overcome the hangover effects from prior drinking.
____	____	4.	People with serious personality problems tend to drink more heavily than do well-adjusted individuals.
____	____	5.	In social situations, people with drinking problems usually sip their drinks.
____	____	6.	Individuals who drink large amounts of alcohol tend to be satisfied with their lives.
____	____	7.	Individuals with a drinking problem almost never use alcohol as a drug to help them relax.
____	____	8.	Individuals with a drinking problem often develop a system of lies to cover up their drinking.
____	____	9.	Individuals with a drinking problem are likely to sneak drinks throughout the day.

TRUE FALSE

____ ____ 10. Individuals with a drinking problem often become angry if questioned about their drinking.

____ ____ 11. Individuals frequently hallucinate after long periods of heavy alcohol use.

____ ____ 12. Experts believe that heavy drinkers seldom drink to relieve boredom.

____ ____ 13. Individuals with a drinking problem may hide bottles of alcohol around the house.

____ ____ 14. Individuals with a drinking problem tend to drink more heavily than usual when under pressure.

____ ____ 15. Individuals with a drinking problem decrease their tolerance for alcohol by drinking larger amounts.

____ ____ 16. Individuals with a drinking problem usually try to keep the time and place of their drinking the same.

____ ____ 17. Individuals with a drinking problem feel comfortable when alcohol is unavailable.

____ ____ 18. Individuals with a drinking problem usually have a clear conscience about their drinking behavior.

____ ____ 19. Individuals with a drinking problem avoid drinking alone.

____ ____ 20. Individuals with a drinking problem tend to have periods of nonstop drinking.

SCORING KEY

CAUSES AND SIGNS OF ALCOHOLISM

Item	Answer
1	F
2	T
3	T
4	T
5	F
6	F
7	F
8	T
9	T
10	T
11	T
12	F
13	T
14	T
15	F
16	F
17	F
18	F
19	F
20	T

USING ALCOHOL RESPONSIBLY

TYPE OF MEASURE: Skill

OUTCOME ASSESSED: Techniques of Responsible Alcohol Use

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

Individuals are presented with descriptions of situations in which fictitious persons either have been or will be drinking alcohol. Individuals are asked to select an appropriate, responsible course of action from among possible options or to indicate that none of the suggested options is appropriate.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 253-256.

USING ALCOHOL RESPONSIBLY

This test presents descriptions of people who want to use alcohol responsibly. Assume that each individual is of average weight and has an average tolerance for alcohol.

Read each item. Circle the letter of the appropriate action for the person to take. An appropriate action is one that is:

(1) safe for the person and others, and

(2) effective in controlling the effects of alcohol.

If there is no choice presented that is both safe and effective, circle choice D, "None of the above."

1. John is going to have a couple of drinks after work. He wants to be able to drive home safely. An appropriate action for John to take would be to:

   A. Drink several cups of strong coffee before he leaves for home.

   B. Wait at least one hour before driving for each drink consumed.

   C. Eat snack foods like potato chips while he is drinking.

   D. None of the above.

2. Carla is planning on having a couple of drinks at an evening party. She wants to do something to reduce how drunk she feels when she leaves. An appropriate action for Carla to take would be to:

   A. Have a big breakfast the morning of the party.

   B. Have something to eat right before she leaves the party.

   C. Have some cottage cheese or milk within one hour before drinking.

   D. None of the above.

3. Tina came home from work and had several drinks. Then her boss called to say she is coming over shortly. Tina wants to be as alert as possible when her boss arrives. An appropriate action for Tina to take would be to:

   A. Go outside for a few minutes and get some fresh air.

   B. Take a pill to help her feel more alert.

   C. Have a light meal before her boss arrives.

   D. None of the above.

4. George has had three glasses of wine at a one-hour office party and wants to drive home. An appropriate action for George to take would be to:

   A. Wait for about three hours and then drive himself home.

   B. Get a ride with a friend who has had only a couple of glasses of wine.

   C. Drink several glasses of milk before leaving.

   D. None of the above.

5. Kevin has had a few mixed drinks before a business meeting and feels a little drunk. He wants to be sure to be alert and in full control at the meeting. An appropriate action for Kevin to take would be to:

   A. Have a glass of wine instead of another mixed drink.

   B. Go for a walk outside before the meeting.

   C. Have some fresh fruit or fruit juice.

   D. None of the above.

6. Ellen wants to be able to drink alcohol at a party without getting too drunk. An appropriate action for Ellen to take would be to:

   A. Have some milk before she starts to drink.

   B. Drink strong coffee before she starts to drink.

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C. Eat some nuts along with her drink.

D. None of the above.

7. Michael is planning on going to many different parties in one night. He wants to be able to drink but not get too drunk to drive. An appropriate action for Michael to take would be to:

A. Be sure to drink only one kind of alcohol.

B. Start to eat something as soon as he starts drinking.

C. Wait about one hour between every drink he has.

D. None of the above.

8. Sheila is out with friends and feels a little drunk after having two glasses of wine. She wants to sober up and then have some more to drink. An appropriate action for Sheila to take would be to:

A. Do some deep-breathing exercises before she has another drink.

B. Go for a short brisk walk before she has another drink.

C. Wait about two hours before she has another drink.

D. None of the above.

9. Alan has consumed a six-pack of beer at an hour and a half picnic and now wants to drive home. An appropriate action for Alan to take would be to:

A. Wait about one hour before leaving.

B. Eat some rolls or bread before leaving.

C. Drink some strong black coffee before leaving.

D. None of the above.

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10. Barbara had two glasses of wine at a business luncheon. She got together with some friends after work and had two more glasses of wine. She now wants to be able to get home safely. An appropriate action for her to take would be to:

    A. Get a ride from someone who has had three glasses of wine but had no drinks earlier in the day.

    B. Wait two hours before driving home.

    C. Wait one hour before driving and drink plenty of coffee in the meantime.

    D. None of the above.

11. Millie has had several glasses of wine while watching an afternoon football game on television. She wants to leave in an hour to pick up several friends and go to a movie. An appropriate action for Millie to take would be to:

    A. Jog for half an hour before leaving to pick up her friends.

    B. Ask one of her friends to do the driving for the evening.

    C. Drink several glasses of milk before driving.

    D. None of the above.

12. Brian and several of his friends have just passed an important test. They celebrated by drinking at one of the friends' homes. Brian has had two drinks and wants to leave. An appropriate action for Brian to take would be to:

    A. Decide which of his friends is least drunk and ask that person for a ride home.

    B. Drink several cups of black coffee before driving home.

    C. Wait for a couple of hours and then drive home.

    D. None of the above.

13. Stephanie and her husband drank a bottle of wine while eating dinner at a restaurant. Although Stephanie has had less to drink than her husband, she feels dizzy. Now, Stephanie wants to drive home. An appropriate action for Stephanie to take would be to:

    A. Order strong coffee for herself and her husband and drive home.

    B. Go for a short walk before she drives home.

    C. Eat a dessert containing ice cream or other dairy products before driving home.

    D. None of the above.

14. Jeff wants to drink four 12-ounce cans of beer while working on his motorcycle. After that, he wants to be sober enough to pick up a friend and drive to a concert. An appropriate action for Jeff to take would be to:

    A. Finish his beers at least three hours before leaving for the concert.

    B. Eat some nuts and cheese while he is drinking the beer.

    C. Take a pill to increase his alertness and energy level before driving to the concert.

    D. None of the above.

15. Pamela plans on having a couple of drinks at an afternoon party. She does not want to be drunk for a date she has planned in the early evening. An appropriate action for Pamela to take would be to:

    A. Eat a hamburger just before going to the party.

    B. Do some deep breathing exercises between the party and her date.

    C. Eat some raw vegetables with her drinks at the party.

    D. None of the above.

SCORING KEY
USING ALCOHOL RESPONSIBLY

Item	Answer
1	B
2	C
3	D
4	A
5	D
6	A
7	C
8	C
9	D
10	B
11	B
12	C
13	D
14	A
15	A

DRINKING AND ASSERTIVENESS

TYPE OF MEASURE: Skill

OUTCOME ASSESSED: Assertiveness in Relation to Drinking

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

Individuals are presented with descriptions of fictitious persons experiencing discomfort due to the presence of others who are drinking or offering alcohol. Individuals are asked to select from among possible options a course of action that incorporates assertiveness techniques or to indicate that none of the suggested options is appropriate.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 257-259.

DRINKING AND ASSERTIVENESS

This test presents descriptions of people who feel uncomfortable because others are drinking or offering them alcohol. Each person wants to deal with the problem by using assertiveness techniques.

Read each item. Then circle the letter of the action which describes an assertive response to the situation described. If there is no assertive response presented, circle choice D, "None of the above."

1. Carol is watching television with her husband, and he is drinking. Carol has been trying to reduce the amount she drinks, but the sight of her husband's drink is weakening her will power. To act assertively, Carol should:

   A. Concentrate on the television show and try to ignore her urge to drink.

   B. Ask her husband if he would watch TV in another room when he drinks.

   C. Move to another room where she can't see his drink.

   D. None of the above.

2. George and Susan are spending an evening together. After dinner, Susan suggests that they relax by the fire with after dinner drinks. To act assertively, George should:

   A. Tell Susan that he doesn't want to drink.

   B. Tell Susan that he has a better idea and ask her to go for a walk.

   C. Hold a drink without actually drinking it.

   D. None of the above.

3. Ann has recently stopped drinking, but she finds it hard to control her desire to drink wine with a meal. She is at lunch with Betty, a good friend, who asks Ann about ordering wine as soon as they sit down. To act assertively, Ann should:

   A. Tell Betty not to order any wine.

   B. Tell the waiter that it is hard for her to resist wine around someone who is drinking.

   C. Order a soft drink to help her ignore Betty's drinking.

   D. None of the above.

4. When Alan decided to stop drinking, he got rid of all the alcohol in his apartment. His girlfriend Paula still drinks, and she has wine and liquor available in her apartment. To act assertively, Alan should:

   A. Ask Paula if she would keep all of her wine and liquor where he won't see it.

   B. Insist that Paula get rid of all the wine and liquor in her apartment.

   C. Ask Paula to drink only the types of wine and liquor that he does not particularly enjoy.

   D. None of the above.

5. While John and several of his friends are watching a football game on television, a six pack of beer is passed around. When everyone takes a beer except John, one friend asks him why he isn't drinking. To act assertively, John should:

   A. Take a beer, open it, and drink a few sips of it.

   B. Tell his friends that they are dumb to drink because they are ruining their health.

   C. Ignore the comment and concentrate on the football game.

   D. None of the above.

6. While at a party, Mark is talking with Rita, an old friend. Rita knows that Mark is trying to stop drinking, so she decides to offer Mark a drink to test his willpower. To act assertively, Mark should:

   A. Tell Rita that she has much less willpower than he does.

   B. Accept the drink, saying that he will have it later.

   C. Inform Rita that he no longer drinks.

   D. None of the above.

7. Nancy is on a date with Tom. To impress her, Tom buys a couple of drinks and offers one to Nancy, saying that she will look mature if she drinks it. To act assertively, Nancy should:

   A. Change the subject by asking Tom whether he thinks her new dress is attractive.

   B. Turn down the offer, saying she doesn't enjoy drinking.

   C. Take the drink he offers and hold it in her hand without drinking it.

   D. None of the above.

8. Jim has just moved into a new neighborhood. He wants to be accepted by the other young people there. They tell Jim that he will have to drink a bottle of wine without stopping before he can be admitted to their crowd. To act assertively, Jim should:

   A. Keep the crowd entertained with stories about the activities at his last school.

   B. Drink the bottle of wine so that he can make new friends.

   C. Tell the crowd that he does not drink because it can be unhealthy.

   D. None of the above.

9. David and his brother are home alone on an evening when their parents are out. When some friends stop by, his brother suggests they drink some of his father's liquor and encourages David to join them. To act assertively, David should:

   A. Go to another room and hope that the friends leave before his parents come home.

   B. Tell his brother that he doesn't want to drink with them.

   C. Take a drink but make sure that it contains plenty of water.

   D. None of the above.

10. Louise and her husband are having supper in a restaurant. Her husband encourages her to have a glass of wine, even though she doesn't like to drink. To act assertively, Louise should:

    A. Tell her husband that he is being unthoughtful.

    B. Accept a glass of wine but only drink a little of it.

    C. Change the subject by mentioning something about their plans for the evening.

    D. None of the above.

11. Michael, who does not drink alcohol, pretended to have a drink for his role in a school play. Afterwards, his girlfriend Jane tells him that drinking made him look more mature. She asks him to drink with her at a party. To act assertively, Michael should:

    A. Tell Jane that he doesn't want to drink in order to create an "image."

    B. Accept a drink at the party but not actually drink it.

    C. Pretend that he didn't hear her and ask Jane if she would like to dance.

    D. None of the above.

12. Frieda likes to go to baseball games with a group of people from her office. One of her co-workers, Mike, drinks beer at the games and tries to get Frieda to join him even though he knows she quit drinking. To act assertively, Frieda should:

    A. Make a point of announcing that she stopped drinking a long time ago.

    B. Ask Mike not to encourage her to drink because she doesn't drink anymore.

    C. Start going to baseball games with another group of friends.

    D. None of the above.

13. Daniel is trying to reduce the amount of alcohol he drinks. Every time he goes to visit his parents, his father offers him a drink, as it has been their habit to drink while they are talking. To act assertively, Daniel should:

    A. Tell his father that people don't need drinks in order to have a conversation.

    B. Ask his father not to drink in his presence.

    C. Ask his father not to offer him a drink.

    D. None of the above.

14. Gwen does not drink liquor because she knows that she has a difficult time controlling the amount she drinks. Whenever she visits her neighbor Mildred, Mildred offers Gwen a drink. To act assertively, Gwen should:

    A. Tell Mildred that she doesn't drink alcohol.

    B. Tell Mildred that she's not thirsty.

    C. Say nothing in the interest of keeping their friendship.

    D. None of the above.

15. Bruce has quit drinking because he found that it affected his ability to do his job. His roommate Frank drinks quite heavily in the evenings when they are both home and encourages Bruce to drink too. To act assertively, Bruce should:

    A. Tell Frank to stop drinking because Frank's drinking makes him want to drink.

    B. Say nothing and continue to put up with the pressure of Frank's encouragement to drink.

    C. Find a friend who needs a roommate and move to a new apartment.

    D. None of the above.

SCORING KEY

DRINKING AND ASSERTIVENESS

Item	Answer
1	B
2	A
3	D
4	A
5	D
6	C
7	B
8	C
9	B
10	D
11	A
12	B
13	C
14	A
15	D

INCORRECT ANSWER CHOICE ANALYSES

The incorrect answer choices for each item are listed below using the following method of annotation:

Passive = a passive response

Aggressive = an aggressive response

Acquiescent = an acquiescent response

Non-confrontational = a non-confrontational response

None of the above = a correct response was provided

	PASSIVE	AGGRESSIVE	ACQUIESCENT	NON-CONFRONTATIONAL	NONE OF THE ABOVE
1.	A	-	-	C	D
2.	-	-	C	B	D
3.	C	A	-	B	-
4.	-	B	-	C	D
5.	C	B	A	-	-
6.	-	A	B	-	D
7.	-	-	C	A	D
8.	-	-	B	A	D
9.	-	-	C	A	D
10.	-	A	B	C	-
11.	-	-	B	C	D
12.	-	-	-	A, C	D
13.	-	B	-	A	D
14.	C	-	-	B	D
15.	B	A	-	C	-

COMMUNICATING ABOUT DRINKING

TYPE OF MEASURE: Skill

OUTCOME ASSESSED: Interpersonal Relationships: Effective Communication Techniques

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

Individuals are presented with descriptions of fictitious persons who want either to express their feelings about their efforts to stop drinking or to request assistance with their efforts to control their drinking behavior. Individuals are asked to select from among three statements the one that most clearly and directly communicates the fictitious person's message or to indicate that none of the suggested statements is appropriate.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 260-263.

COMMUNICATING ABOUT DRINKING

This test presents descriptions of people who want to control or stop their drinking. They each have a message about drinking that they want to communicate to another individual.

Read each item. Then circle the letter of the choice that expresses the individual's message clearly and directly. If there is no clear and direct response given, circle choice D, "None of the above."

1. Michael wants to communicate to his friend that he gets bored and has a hard time not drinking when he's home alone. The most clear and direct way for Michael to say this is:

A. "I get really bored when I'm home alone."

B. "I get very bored and have trouble not drinking when I'm home alone.

C. "I can't possibly stay home alone without having at least one drink."

D. None of the above.

2. Martha feels depressed when she thinks about not drinking and giving up the pleasure she gets from alcohol. The most clear and direct way for Martha to say this is:

A. "You know how I feel about quitting alcohol and giving up the pleasure I get from drinking."

B. "I'm sure everyone feels sad when they think about giving up the pleasure of drinking."

C. "I get depressed when I realize I'll have to go without the pleasure of drinking."

D. None of the above.

3. Reggie wants to tell his wife that he feels good about himself because he didn't drink while out with a group of friends who were drinking. The most clear and direct way for Reggie to say this is:

   A. "I feel good about myself because I didn't drink even though I was out with a group of drinkers."

   B. "I realize how foolish my friends are when I'm not drinking and they are."

   C. "You can imagine how I feel after going without a drink for the whole evening."

   D. None of the above.

4. Joyce wants to tell her husband that she feels happy about being able to turn down a drink that was offered to her at a business luncheon. The most clear and direct way for Joyce to say this is:

   A. "Now I'll never again have to worry about having a drink when I'm in a business situation."

   B. "You know what it means to me to have turned down that drink at the business luncheon."

   C. "They offered me a drink at the business luncheon and I turned it down."

   D. None of the above.

5. Mark wants to tell his friend that he feels deprived when he has a good meal without a glass of wine. The most clear and direct way for Mark to say this is:

   A. "Everyone knows that a good meal isn't really complete unless one can enjoy it with a glass of wine."

   B. "I feel like I'm missing something special when I don't have a glass of wine with a good meal."

   C. "I enjoy a glass of wine with a good meal."

   D. None of the above.

6. Janice wants to ask her roommate not to drink when they spend time together in the evenings. Seeing her roommate drink makes it hard for Janice to keep from drinking. The most clear and direct way for Janice to say this is:

   A. "It's not very considerate of you to drink in front of me when you know I'm trying to quit."

   B. "You can imagine how difficult it is for me not to drink if you drink when we're together."

   C. "Sometimes I feel uncomfortable when I'm with you."

   D. None of the above.

7. Bruce is trying to stop drinking alcohol. He wants to ask Bill, his neighbor, not to offer him a beer when he goes over to Bill's house to visit. The most clear and direct way for Bruce to say this is:

   A. "Please don't offer me a beer because you know how difficult it is for me to refuse the offer."

   B. "When people try to stop drinking, it helps if their friends don't offer them beers."

   C. "Please help me stop drinking by not offering me a beer when I come over to visit."

   D. None of the above.

8. Geraldine wants to ask her husband to help her drink less by agreeing not to keep alcohol in the house. The most clear and direct way for Geraldine to say this is:

   A. "I would like you to help me drink less by not keeping any alcohol at home."

   B. "Please help me drink less alcohol."

   C. "If you really care about my health, you'll help me drink less alcohol by not keeping any at home."

   D. None of the above.

9. Steve wants to ask his wife to help him stop drinking by not drinking wine in front of him at dinner. The most clear and direct way for Steve to say this is:

   A. "You're not being very sensitive to my needs if you continue to drink wine at the dinner table."

   B. "People can't be expected to stop drinking when other people drink wine in front of them."

   C. "I think we can make our mealtime more enjoyable."

   D. None of the above.

10. Susan is trying not to drink alcohol and wants to express her concern about going to a party where everyone will be drinking. The most clear and direct way for Susan to say this is:

    A. "You must know how worried I am about going to a party where everyone else will be drinking."

    B. "I'm worried about going to that party."

    C. "I'm concerned about going to that party because I'll have a tough time not drinking when everyone else is."

    D. None of the above.

11. Jim's friend Jack often encourages him to have a drink when they go out together after work. Jim is trying not to drink and wants to ask Jack to help him by not encouraging him to drink. The most clear and direct way for Jim to say this is:

    A. "You're really being unthoughtful when you encourage me to drink."

    B. "I'm trying not to drink and I'd like you to help me by not encouraging me to have a drink."

    C. "People can't stop drinking if their friends encourage them to drink."

    D. None of the above.

12. Linda is trying to reduce the amount she drinks. Sometimes she feels embarrassed when her friends ask her why she isn't having a drink. The most clear and direct way for Linda to say this is:

    A. "Sometimes I feel uncomfortable when people ask me why I'm not drinking."

    B. "Sometimes I feel very embarrassed."

    C. "You can imagine how embarrassed I get when people ask me why I'm not drinking."

    D. None of the above.

13. Sam wants to ask his wife to help him reduce the amount he drinks by reminding him if he has more than two drinks. The most clear and direct way for Sam to say this is:

    A. "Because everyone needs help reducing the amount they drink, please remind me if I have more than two drinks."

    B. "Please help me reduce the amount I drink by reminding me when I have more than two drinks."

    C. "I want you to help me limit the number of drinks I have."

    D. None of the above.

14. Jennifer is proud of herself because she gave up drinking six months ago and she hasn't had a drink since. The most clear and direct way for Jennifer to say this is:

    A. "I feel good about myself."

    B. "I'm never going to have a drink again."

    C. "I haven't had a drink for six months."

    D. None of the above.

15. Louis is depressed because he is trying to stop drinking but he had several drinks the other night with a friend. The most clear and direct way for Louis to say this is:

    A. "I'll never be able to give up drinking."

    B. "You can imagine how terrible I feel about breaking down and having several drinks when I'm trying not to drink."

    C. "I'm depressed because I had some drinks with a friend the other night, even though I'm trying to stop drinking."

    D. None of the above.

SCORING KEY

COMMUNICATING ABOUT DRINKING

Item	Answer	Item	Answer
1	B	9	D
2	C	10	C
3	A	11	B
4	D	12	A
5	B	13	B
6	D	14	D
7	C	15	C
8	A		

INCORRECT ANSWER CHOICE ANALYSES

The incorrect answer choices for each item are listed below using the following method of annotation:

Overgeneralized - a response that extends a single experience to all experiences or always associates a particular behavior with certain circumstances.

Crystal Ball - a response in which the assumption is made that the receiver already knows the sender's feelings or the content of the message.

Judgment - a response that blames or criticizes.

Incomplete - a response that does not provide all the information needed to send a complete message.

None of the above - a response that indicates there is no correct answer when there is a correct answer.

	Overgeneralized Message	Crystal Ball Message	Judgment Message	Incomplete Message	None of the above
1	C			A	D
2	B	A			D
3		C	B		D
4	A	B		C	
5	A			C	D
6		B	A	C	
7	B	A			D
8			C	B	D
9	B		A	C	
10		A		B	D
11	C		A		D
12		C		B	D
13	A			C	D
14	B			A, C	
15	A	B			D

TALKING ABOUT DRINKING

TYPE OF MEASURE: Skill

OUTCOME ASSESSED: Interpersonal Relationships: Effective Communication Techniques

TARGET POPULATION: Elementary school children

GENERAL DESCRIPTION:

Children are presented with descriptions of fictitious persons who want either to express their feelings about not drinking or to tell others that they don't want to drink alcohol. Children are asked to select from among three statements the one that most clearly and directly communicates the fictitious person's message.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 264-266.

TALKING ABOUT DRINKING

This test is about young people who want to tell how they feel about drinking alcohol. Read about each person. Then choose the most clear and direct way of saying what the person wants to tell. Circle the letter of this choice.

1. Mark's older brother bought some wine for Mark and his friend Bill to drink to help them celebrate the end of the school year. Bill wants to tell Mark that he doesn't want to drink the wine. The most clear and direct way for Bill to say this is:

   A. "People don't need to drink alcohol in order to celebrate."

   B. "I don't want to celebrate with you."

   C. "I really don't want to drink the wine.

2. Mike wants to tell his father that he feels good about not drinking at a party, even though his friends were drinking. The most clear and direct way for Mike to say this is:

   A. "I didn't drink at the party."

   B. "I feel great because I didn't drink, even though my friends were drinking at the party."

   C. "You can imagine how I feel about not drinking at a party where my friends were drinking."

3. Kathy and Jane are at the park together. Jane asks Kathy to try drinking some beer. Kathy wants to tell Jane that she doesn't want to drink any beer. The most clear and directly way for Jane to say this is:

   A. "I really am not interested in drinking any beer."

   B. "I'm not at all interested."

   C. "You must be crazy if you think I want to drink beer with you."

4. Marsha wants to tell her friend that she is proud of herself for not even wanting to drink alcohol. The most clear and direct way for Marsha to say this is:

    A. "People who don't drink alcohol should feel good about themselves."

    B. "I feel good about myself because I'm not interested in drinking alcohol."

    C. "I don't think I want to drink alcohol."

5. Louis has been invited to a party where he thinks that other people might be drinking. He wants to tell his brother that he's worried about the others making fun of him for not drinking. The most clear and direct way for Louis to say this is:

    A. "I'm worried about going to that party."

    B. "I guess I'll always be afraid that people will make fun of me for not drinking."

    C. "I'm afraid that the other people at the party will laugh at me because I don't drink."

6. Marilyn thinks it will be fun to drink some wine with her sister Karen after their parents are asleep. Karen wants to tell Marilyn that she won't drink because she doesn't like it. The most clear and direct way for Karen to say this is:

    A. "I don't want to drink because I don't enjoy it."

    B. "If you think drinking is fun, you must not have much excitement in your life."

    C. "I don't think drinking is that much fun."

7. Valerie wants to tell her mother that she feels bad because some of her classmates called her names when she didn't try the alcohol they were drinking. The most clear and direct way for Valerie to say this is:

    A. "I don't like to be called names."

B. "I feel bad because some of my classmates called me names for not wanting to drink with them."

C. "You can see how bad I feel about being called names just because I didn't want to drink."

8. Rosy's friend thinks that they'll look older if they drink. Rosy wants to tell her friend that she doesn't wish to drink, whether or not it makes her look older. The most clear and direct way for Rosy to say this is:

A. "You're foolish if you think I would drink just to look older."

B. "I don't want to look older."

C. "Even if it does help me look older, I'm not interested in drinking."

9. Nick wants to tell his brother that he feels good because he didn't drink any beer while he was at a baseball game with some other people who were drinking. The most clear and direct way for Nick to say this is:

A. "I feel good because I didn't drink at the game even though I was with people who were drinking."

B. "You must be blind not to see how good I feel about not drinking while I was at the game."

C. "People shouldn't drink even if they're around others who are drinking."

10. Barry wants to tell his mother that he feels nervous because a neighbor said that Barry can be in a neighborhood club only if he drinks. The most clear and direct way for Barry to say this is:

A. "I am anxious about what one of the neighbors told me."

B. "I feel anxious because I must drink in order to be in the neighborhood club."

C. "Can't you see how nervous I am about having to drink in order to be in that club?"

SCORING KEY

TALKING ABOUT DRINKING

Item	Answer
1	C
2	B
3	A
4	B
5	C
6	A
7	B
8	C
9	A
10	B

INCORRECT ANSWER CHOICE ANALYSES

The incorrect answer choices for each item are listed below using the following method of annotation.

Overgeneralized	-	a response that extends a single experience to all experiences or always associates a particular behavior with certain circumstances.
Crystal Ball	-	a response in which the assumption is made that the receiver already knows the sender's feelings or the contents of the message.
Judgment	-	a response that blames or criticizes.
Incomplete	-	a response that does not provide all the information needed to send a complete message.

	Overgeneralized Message	Crystal Ball Message	Judgment Message	Incomplete Message
1	A			B
2		C		A
3			C	B
4	A			C
5	B			A
6			B	C
7		C		A
8			A	B
9	C		B	
10		C		A

RESPONDING TO OTHERS ABOUT DRINKING

TYPE OF MEASURE: Skill

OUTCOME ASSESSED: Interpersonal Relationships: Effective Response Techniques

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

Individuals are presented with statements by fictitious persons. These statements either express a person's feelings about efforts to stop drinking or request assistance with efforts to control drinking behavior. Individuals are to select from among four statements the response that best communicates acceptance and understanding of the fictitious person's situation.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 267-269.

RESPONDING TO OTHERS ABOUT DRINKING

This test presents statements by individuals who want to communicate their feelings about stopping drinking or want help controlling their drinking. Read each statement. Then circle the letter of the response that best communicates acceptance and understanding of the message.

1. Dan: "I'm trying not to drink, but I feel left out when I'm with my friends and they're all drinking."

   The response that best communicates acceptance and understanding of Dan's situation is:

   A. "You should probably find a new group of friends who are nondrinkers."

   B. "There is no reason to feel left out just because you're not drinking and others are."

   C. "You feel left out when people around you are drinking and you are not."

   D. "You drink in order to be accepted by others."

2. Doris: "I'm pleasantly surprised to find I can still enjoy going to a party even if I don't drink."

   The response that best communicates acceptance and understanding of Doris' situation is:

   A. "It was foolish of you to assume that your enjoyment of parties depended on having a drink."

   B. "You're pleased to find out that not drinking hasn't changed your enjoyment of parties."

   C. "The next thing you should try is going without a glass of wine at dinner."

   D. "Drinking is still bad for you unless you give it up completely."

3. Patrick: "I feel like I can't start the day if I don't have a drink in the morning."

The response that best communicates acceptance and understanding of Patrick's situation is:

A. "You're really in a bad state if you need a drink to start your day."

B. "You should get out of bed and run around the block to wake up in the morning."

C. "If you give in to your urge to drink in the morning, you'll be right back where you started."

D. "You find it difficult to start the day when you go without a drink."

4. Janet: "I get nervous and feel as if I need something to do when I'm at a party now that I don't drink."

The response that best communicates acceptance and understanding of Janet's situation is:

A. "You get nervous at social gatherings since you stopped drinking."

B. "You used to use drinking as a crutch and hide your nervousness behind alcohol."

C. "Try eating something to keep you mind off of drinking."

D. "You never should have had so much to drink at parties in the first place."

5. Kenneth: "I used to think that drinking before I went to sleep at night helped me relax, but now that I've quit drinking I find that I sleep even better than before."

The response that best communicates acceptance and understanding of Kenneth's situation is:

A. "The next thing you should do is to try to stop drinking during the afternoon."

B. "The problem was that you jumped to the conclusion that drinking helped you to relax."

C. "It's ridiculous to think that drinking can help a person relax."

D. "You've found out that by giving up drinking at night you sleep even better than before."

6. Paula: "I would like to spend the evening at home tonight because if we go out with our friends who drink, I'll want to drink too."

The response that best communicates acceptance and understanding of Paula's situation is:

A. "You don't have enough willpower around people who drink."

B. "You feel that around people who drink you'll get an urge to drink, so tonight you'd rather we stayed home."

C. "There's no reason for you to drink, even if your friends are."

D. "You'll be sorry if you let our friends tempt you to start drinking again."

7. Robert: "Whenever I see liquor at home, I'm tempted to have a drink."

The response that best communicates acceptance and understanding of Robert's situation is:

A. "You are tempted to have a drink when you see liquor."

B. "Go to a different room when you see liquor."

C. "Think about what alcohol can do to your liver whenever you feel the urge to drink."

D. "You can't be serious about quitting if you're tempted to drink every time you see liquor."

8. Alan: "You could be very helpful by refusing to give me a drink tonight at the party, even if I ask you for one."

The response that best communicates acceptance and understanding of Alan's situation is:

A. "You don't need my help to keep you from drinking tonight."

B. "Stay away from all the drinkers at the party tonight."

C. "You'll be sorry if you just rely on me to keep you from drinking."

D. "You want me to help you tonight by turning down your requests for a drink."

9. Joan: "I used to enjoy holiday celebrations, but now that I don't drink I'm afraid that the holidays won't be as much fun."

The response that best communicates acceptance and understanding of Joan's situation is:

A. "If you'd stop feeling sorry for yourself, you'd have just as much fun."

B. "You've just got to tell yourself that you'll have a good time."

C. "You're afraid that holiday celebrations will be less fun because you won't be drinking."

D. "Think about how many people get hurt in automobile accidents because they drink too much during the holidays."

10. Ruth: "I'm proud of myself because I refused a drink at dinner even though my date encouraged me to have one."

The response that best communicates acceptance and understanding of Ruth's situation is:

A. "You're pleased because you were able to refuse a drink even though you were encouraged to have one."

B. "Your date wanted you to have a drink so he wouldn't be drinking alone."

C. "If you go out with that person again, you might give in and have a drink."

D. "You should have known better than to get yourself involved with someone who drinks."

11. Ben: "I'd like you to help me limit the amount I drink by not serving me any liquor when I visit you at your house."

The response that best communicates acceptance and understanding of Ben's situation is:

A. "I shouldn't have to watch over you to make sure you don't drink."

B. "You're afraid that you won't be able to stop after a few drinks."

C. "You'd like me to help you by not serving you any liquor."

D. "You might ask the other people who will be there if they would mind not drinking either."

12. Marilyn: "It's tough for me not to have a drink when I see you having one before dinner."

The response that best communicates acceptance and understanding of Marilyn's situation is:

A. "You don't have the willpower to resist alcohol."

B. "You have a difficult time not drinking before dinner when you see me drinking."

C. "You should find something else, like reading, to keep you busy before dinner."

D. "Don't break down and have a drink or you'll be sorry."

13. Aaron: "Now that I've given up drinking, I have more energy and my health is better."

The response that best communicates acceptance and understanding of Aaron's situation is:

A. "You feel better because you're taking better care of yourself."

B. "I'm glad you've stopped drinking because you used to drink too much."

C. "You'll be sorry if you ever again drink as much as you used to."

D. "You have more energy and your health is better since you've stopped drinking."

14. Chris: "I wish you wouldn't bring beer with us to the beach because I'm tempted to have some."

The response that best communicates acceptance and understanding of Chris' situation is:

A. "You should bring some soft drinks so you're not tempted to have a beer."

B. "You probably think that you'll feel left out if you don't have a beer."

C. "You'd like me not to bring beer to the beach because you're afraid you'll want some."

D. "There's no reason for you to drink just because I'm drinking."

15. Rick: "You'd be doing me a big favor if you support me in my efforts not to drink."

The response that best communicates acceptance and understanding of Rick's situation is:

A. "If you need my support, you're not going to succeed."

B. "You'd like me to help you by supporting your efforts not to drink."

C. "Remember that drinking can damage your liver."

D. "You need my support because it's tough to stop drinking."

SCORING KEY

RESPONDING TO OTHERS ABOUT DRINKING

Item	Answer
1	C
2	B
3	D
4	A
5	D
6	B
7	A
8	D
9	C
10	A
11	C
12	B
13	D
14	C
15	B

INCORRECT ANSWER CHOICE ANALYSES

The incorrect answer choices for each item are listed below using the following method of annotation:

Directing = a response that tells or suggests to the message sender what to do

Warning = a response that warns the message sender what might happen

Criticizing/Disagreeing = a response that criticizes or disagrees with the message sender

Diagnosing = a response that suggests an explanation for the message sender's statement

	Directing	Warning	Criticizing/Disagreeing	Diagnosing
1	A		B	D
2	C	D	A	
3	B	C	A	
4	C		D	B
5	A		C	B
6		D	A, C	
7	B	C	D	
8	B	C	A	
9	B	D	A	
10		C	D	B
11	D		A	B
12	C	D	A	
13		C	B	A
14	A		D	B
15		C	A	D

HOW MUCH DO THEY MATTER?

TYPE OF MEASURE: Affective

OUTCOME ASSESSED: Perceived Consequences of Alcohol and Substance Abuse

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

This inventory is a Likert scale in which individuals are asked to register their degree of agreement with a series of statements about the possible effects of using alcohol or drugs on a person's health, family, ability to make and keep friends, financial condition, ability to carry out daily tasks, appearance, and dependence on these substances, and about the legal danger and danger to others associated with alcohol or drug use.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 270-272.

HOW MUCH DO THEY MATTER?

This survey is about how people might be affected by using drugs or alcohol not prescribed by their doctor.

Read each statement. Decide the extent to which you agree with it. Circle the appropriate letter to the left of the statement. Use the following scale:

SA = Strongly Agree
A = Agree
U = Uncertain
D = Disagree
SD = Strongly Disagree

SA A U D SD 1. Using drugs or alcohol every day can lead to dependence on them.

SA A U D SD 2. Heavy drug or alcohol users seem to need money frequently.

SA A U D SD 3. People can use large amounts of drugs or alcohol without it affecting their families.

SA A U D SD 4. Heavy drug or alcohol users have as many friends as other people.

SA A U D SD 5. People under the influence of large amounts of drugs or alcohol endanger other people.

SA A U D SD 6. Using large amounts of drugs or alcohol doesn't affect a person's financial condition.

SA A U D SD 7. People who use large amounts of drugs or alcohol damage their health.

SA A U D SD 8. People who use large amounts of drugs or alcohol have a hard time keeping close friends.

SA A U D SD 9. There is no risk to other from using large amounts of drugs or alcohol.

SA A U D SD 10. After a while, people who use large amounts of drugs or alcohol look the worse for it.

SA A U D SD 11. Heavy drug or alcohol use has no effect on one's ability to perform regular responsibilities.

SA A U D SD 12. People who use large amounts of drugs or alcohol risk getting in trouble with the law.

SA A U D SD 13. People who use large amounts of drugs or alcohol have a hard time making new friends.

SA A U D SD 14. People who regularly use drugs or large amounts of alcohol rarely become dependent on these substances.

SA A U D SD 15. Most heavy drug or alcohol users don't get in trouble with the law.

SA A U D SD 16. Using large amounts of drugs or alcohol can damage relationships within a family.

SA A U D SD 17. People can take large amounts of drugs or alcohol for years without it affecting their appearance.

SA A U D SD 18. People can stay perfectly healthy even if they take large amounts of drugs or alcohol.

SA A U D SD 19. People who use large amounts of drugs or alcohol have difficulty conducting daily tasks.

SA A U D SD 20. Heavy drug or alcohol users find it easy to make new friends.

INSTRUCTIONS FOR SCORING
HOW MUCH DO THEY MATTER?

Point values are assigned to responses according to the following scoring key.

SCORING KEY

	SA	A	U	D	SD
1.	5	4	3	2	1
2.	5	4	3	2	1
3.	1	2	3	4	5
4.	1	2	3	4	5
5.	5	4	3	2	1
6.	1	2	3	4	5
7.	5	4	3	2	1
8.	5	4	3	2	1
9.	1	2	3	4	5
10.	5	4	3	2	1
11.	1	2	3	4	5
12.	5	4	3	2	1
13.	5	4	3	2	1
14.	1	2	3	4	5
15.	1	2	3	4	5
16.	5	4	3	2	1
17.	1	2	3	4	5
18.	1	2	3	4	5
19.	5	4	3	2	1
20.	1	2	3	4	5

This inventory can be scored by adding the point value of every response and dividing this sum by the number of responses. The maximum score attainable of 5 points indicates a strong belief in the negative effects of using alcohol and drugs on one's dependence on these substances, one's health, family, ability to make and keep friends, financial condition, ability to carry out daily tasks, appearance, and the legal dangers and danger to others associated with alcohol and drug abuse.

In addition to an overall score for this outcome, responses can be considered separately as follows:

Area	Item
Dependence	1, 14
Health	7, 18
Family	3, 16
Ability to make friends	13, 20
Ability to keep friends	4, 8
Financial condition	2, 6
Ability to carry out daily tasks	11, 19
Appearance	10, 17
Legal risk	12, 15
Danger to others	5, 9

DO THEY MATTER?

TYPE OF MEASURE: Affective

OUTCOME ASSESSED: Perceived Consequences of Alcohol and Substance Abuse

TARGET POPULATION: Elementary school children

GENERAL DESCRIPTION:

This inventory is a Likert scale in which children are asked to register their degree of agreement with a series of statements about the possible effects of using alcohol or drugs on one's health, family, grades, ability to make and keep friends, and addiction to these substances, and about the legal dangers associated with alcohol or drug use.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 273-275.

DO THEY MATTER?

The statements below are about how people might be affected by using drugs or alcohol. Circle the word that shows how much you agree with each statement.

YES = I agree
MAYBE = I am not sure if I agree
NO = I do not agree

YES MAYBE NO 1. People won't get addicted to drugs or alcohol if they take only small amounts.

YES MAYBE NO 2. Using drugs or alcohol can be bad for your health.

YES MAYBE NO 3. Using drugs or alcohol can cause people to have problems getting along with their families.

YES MAYBE NO 4. People can use drugs or alcohol and still get good grades.

YES MAYBE NO 5. People who use drugs or alcohol have an easy time making new friends.

YES MAYBE NO 6. People who use drugs or alcohol can get into trouble with the law.

YES MAYBE NO 7. People can stay healthy even if they take drugs or alcohol.

YES MAYBE NO 8. People who use drugs or alcohol have a hard time making new friends.

YES MAYBE NO 9. Using drugs or alcohol does not affect how well people get along with their families.

YES MAYBE NO 10. It is hard to keep good friends if you take drugs or alcohol.

YES MAYBE NO 11. People who use drugs or alcohol can become addicted to them.

YES MAYBE NO 12. Using drugs or alcohol can make you get lower grades in school.

YES MAYBE NO 13. People who use drugs or alcohol have more friends than people who don't.

YES MAYBE NO 14. Most people who use drugs or alcohol don't get into trouble with the law.

INSTRUCTIONS FOR SCORING
DO THEY MATTER?

Point values are assigned to responses according to the following scoring key.

SCORING KEY

	YES	MAYBE	NO
1.	0	1	2
2.	2	1	0
3.	2	1	0
4.	0	1	2
5.	0	1	2
6.	2	1	0
7.	0	1	2
8.	2	1	0
9.	0	1	2
10.	2	1	0
11.	2	1	0
12.	2	1	0
13.	0	1	2
14.	0	1	2

This inventory can be scored by adding the point value of every response and dividing this sum by the number of responses. The maximum score attainable of 2 points indicates a strong belief in the negative effects of using alcohol or drugs on one's addiction to these substances, one's health, family, grades, ability to make and keep friends, and the legal dangers associated with alcohol or drug use.

In addition to an overall score for this outcome, responses can be considered separately as follows:

Area	Items
Addiction	1, 11
Health	2, 7
Family	3, 9
Grades	4, 12
Ability to make friends	5, 8
Ability to keep friends	10, 13
Legal risk	6, 14

WAYS OF COPING

TYPE OF MEASURE: Affective

OUTCOME ASSESSED: Openness to Alternatives

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

Individuals are presented with situations involving pressures that commonly promote the use or abuse of alcoholic beverages or drugs. For each situation, various options for dealing with the pressure are presented, including the options of using alcohol and using drugs. Individuals indicate which, if any, of the options they would be willing to try in order to cope with the situation.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 276-278.

WAYS OF COPING

This questionnaire describes various situations and different ways that people might deal with each one. Place a check next to any of the ways that you would be willing to try in order to deal with the situation. For each question, you may check any number of choices, or none at all.

1. You come home after a busy and frustrating day and you feel very tense.

Which, if any, of the following activities would you be willing to try in order to relax?

____ Read the newspaper or a magazine
____ Take a walk
____ Have something to eat
____ Drink an alcoholic beverage
____ Meditate
____ Listen to music
____ Call a friend
____ Take a tranquilizer
____ Watch television
____ Take a warm bath

2. You are by yourself facing a boring weekend at home and you feel very lonely.

Which, if any, of the following activities would you be willing to try in order to overcome your feeling of loneliness?

____ Go to a movie
____ Read a book
____ Smoke some marijuana
____ Go out shopping
____ Have an alcoholic drink
____ Work on a hobby or project
____ Watch television
____ Take a short trip
____ Go out to eat
____ Call one of your friends

3. You are at a party where you know very few people, and you are feeling uncomfortable.

Which, if any, of the following activities would you be willing to try in order to feel more comfortable?

____ Take a stimulating drug
____ Introduce yourself to a stranger
____ Talk to someone you know, even slightly
____ Have something to eat
____ Have a few drinks
____ Find something to read
____ Sit down and watch the people at the party
____ Pick out a record or tape you'd like to hear
____ Leave the party briefly to take a walk
____ Start a party game

4. You are feeling particularly discouraged because of a series of recent setbacks.

Which, if any, of the following activities would you be willing to try in order to overcome your discouragement?

____ Become involved in charity work
____ Visit a therapist or counselor
____ Relax with an alcoholic beverage
____ Join a club or organization
____ Watch some interesting television programs
____ Go to a sports event
____ Take a drug to feel better
____ Give your house a thorough cleaning
____ Start a new hobby
____ Try to use biofeedback

5. You feel tense because you are under pressure from people at work or school to become more productive.

Which, if any, of the following activities would you be willing to try in order to reduce your tension?

____ Take up a hobby or start a new project
____ Begin a regular walking or jogging routine
____ Work harder so that you become more productive
____ Devote some time to reading something that you enjoy
____ Use some drugs that have a tranquilizing effect

____ Have a few alcoholic drinks
____ Seek the advice of a therapist or counselor
____ Volunteer time to work on a hot line
____ Spend time with close friends or family
____ Take a short trip to "get away from it all"

6. You are feeling quite anxious about an upcoming event which will affect your future.

Which, if any, of the following activities would you be willing to try in order to reduce your anxiety?

____ Use a drug that has a calming effect
____ Begin using a deep relaxation technique
____ Plan an outing with family or friends
____ Spend some time exercising
____ Busy yourself with housekeeping or home repairs
____ Relax with an alcoholic beverage
____ Talk to someone about your feelings
____ Read an absorbing novel or book
____ Spend a day in the park
____ Call a radio talk show

7. You are feeling angry and frustrated as the result of an argument with a close friend.

Which, if any, of the following activities would you be willing to try in order to calm yourself down?

____ Release your anger in a vigorous activity
____ Pour yourself a stiff drink
____ Go for a long walk by yourself
____ Get involved in a craft or hobby
____ Visit a few friends
____ Practice meditation
____ Sit quietly and think through your feelings
____ Go to the movies
____ Take a tranquilizing drug
____ Plan and cook a special meal

8. Someone very close to you is seriously ill, and you are feeling very upset.

Which, if any, of the following activities would you be willing to try in order to relieve your anxiety?

____ Relax with an alcoholic beverage
____ Talk with a close friend
____ Go for a ride in a quiet area
____ Get some exercise
____ Listen to your favorite music
____ Smoke marijuana to ease your tension
____ Read an uplifting book
____ Attend a yoga class
____ Go out to dinner
____ Work on a project or hobby

9. You have learned that your work is up for review by your supervisor, and you are very nervous about the outcome.

Which, if any, of the following activities would you be willing to try in order to decrease your nervousness?

____ Occupy yourself with some routine activity
____ Get together with a group of friends
____ Practice yoga or some stretching exercises
____ Go to a play or a concert
____ Take a drug with a tranquilizing effect
____ Take a long walk in a quiet area
____ Have a couple of alcoholic drinks
____ Do some deep breathing exercises
____ Work on a crossword puzzle
____ Watch some interesting television programs

10. You must make a presentation to a large group of people in a few days, and you feel uneasy about making a good impression.

Which, if any, of the following activities would you be willing to try in order to overcome your uneasiness?

____ Do some aerobic exercises
____ Smoke some marijuana
____ Have dinner with some friends
____ Have someone help you practice your presentation
____ Do some work around the house
____ Go to a play or a movie
____ Practice some form of meditation
____ Read some "self-help" literature
____ Have one or two alcoholic drinks
____ Work on improving your physical appearance

INSTRUCTIONS FOR SCORING
WAYS OF COPING

Several procedures are available for scoring this inventory, two of which are described below. In the first procedure, 1 point is assigned for every selected response option that does not indicate the use of alcoholic beverages or drugs. The maximum score attainable of 80 points indicates strong willingness to try a variety of techniques for dealing with pressures that commonly promote the use or abuse of alcoholic beverages or drugs.

In another scoring procedure, the number of responses selected that do not indicate the use of alcoholic beverages or drugs is divided by the total number of options selected. The maximum score attainable of 1.00 indicates a strong tendency to be willing to use techniques other than alcoholic beverages or drugs for dealing with pressures that commonly promote the use or abuse of alcoholic beverages or drugs.

The response options, by item, that indicate the use of alcoholic beverages and drugs are as follows:

Item	Alcoholic Beverages	Drugs
1	d	h
2	e	c
3	d	a
4	c	g
5	f	e
6	f	a
7	b	i
8	a	f
9	g	e
10	i	b

DIFFERENT CHOICES

TYPE OF MEASURE: Affective

OUTCOME ASSESSED: Openness to Alternatives

TARGET POPULATION: Elementary school children

GENERAL DESCRIPTION:

Children are presented with situations involving pressures that commonly promote the use or abuse of alcoholic beverages or drugs. For each situation, various options for dealing with the pressure are presented, including the option of using alcohol or using drugs. Children are asked to indicate which, if any, of the options they would be willing to try in order to cope with the situation.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 279-281.

DIFFERENT CHOICES

Each question tells about different feelings you might have and ways that some people might try to deal with each other. Place a check next to any ways that you would be willing to try. For each question, you may check any number of choices, or none at all.

1. You are alone at home on a long afternoon and you feel very lonely.

Which, if any, of the following things would you be willing to try in order to feel less lonely?

____ Call up a friend on the telephone
____ Read a book
____ Smoke some marijuana
____ Clean up your room
____ Watch TV
____ Go for a walk in your neighborhood

2. You are feeling very nervous about a test you must take at school soon.

Which, if any, of the following things would you be willing to try in order to calm yourself down?

____ Do some exercises
____ Have a beer
____ Take a warm bath
____ Go out to the movies
____ Study for the test
____ Visit a friend

3. You are feeling upset because you have had a fight with a close friend.

Which, if any, of the following things would you be willing to try in order to deal with your upset feelings?

____ Busy yourself with a hobby
____ Talk to your parents about the fight
____ Have something to eat
____ Listen to some good music
____ Take a drug that will relax you
____ Go out and play with other friends

4. You are feeling anxious because you have a lot of work to do and not much time to get it done.

Which, if any, of the following things would you be willing to try in order to feel less anxious?

____ Have an alcoholic drink
____ Get busy with the work
____ Take a hot shower
____ Do some sit-ups or push-ups
____ Plan carefully how you will use your time
____ Ask someone to help you

5. You are at a birthday party where you don't know very many people and are feeling out of place.

Which, if any, of the following things would you be willing to try in order to feel more comfortable?

____ Introduce yourself to someone new
____ Pick out a record or tape to play
____ Ask someone to dance
____ Have something to eat
____ Talk with someone you know
____ See if you can find any alcohol to drink

6. You are feeling angry because you have been told you must do something you don't want to do.

Which, if any, of the following things would you be willing to try in order to deal with your anger?

____ Tell a friend about it
____ Play some of your favorite music
____ Relax with some marijuana
____ Talk it over with your parents
____ Go for a walk
____ Watch TV for a while

7. You are worried because one of your close friends was in a car accident.

Which, if any, of the following things would you be willing to try in order to calm yourself?

____ Go for a long walk
____ Get busy with your school work
____ Tell your parents how you feel
____ Take a pill that will relax you
____ Watch television for a while
____ Listen to your favorite music

8. You are feeling anxious about whether you will make friends at a new school you will be attending.

Which, if any, of the following things would you be willing to try in order to feel more comfortable?

____ Watch TV for a while
____ Drink one or two beers
____ Spend some time on a hobby
____ Talk about it with your parents
____ Make plans to meet your old friends after school
____ Make sure your clothes look their best

9. You have had a bad day at school and you are feeling very anxious.

Which, if any, of the following things would you be willing to try in order to relax?

____ Work extra hard on your homework
____ Call a good friend on the telephone
____ Sit with your eyes closed for a while
____ Have something good to eat
____ Drink an alcoholic drink
____ Get together with some friends

10. You are feeling troubled about a very private problem.

Which, if any, of the following things would you be willing to try in order to feel less troubled?

____ Smoke some marijuana
____ Talk it over with your closest friend
____ Read a book or magazine story about it
____ Go to the movies
____ Take a long bicycle ride
____ Make a phone call to a hot line

INSTRUCTIONS FOR SCORING
DIFFERENT CHOICES

Several procedures are available for scoring this inventory, two of which are described below. In the first procedure, 1 point is assigned for every selected response option that does not indicate the use of alcoholic beverages or drugs. The maximum score attainable of 50 points indicates strong willingness to try a variety of techniques for dealing with pressures that commonly promote the use or abuse of alcoholic beverages or drugs.

In another scoring procedure, the number of responses selected that do not indicate the use of alcoholic beverages or drugs is divided by the total number of options selected. The maximum score attainable of 1.00 indicates a strong tendency to be willing to use techniques other than alcoholic beverages or drugs for dealing with pressures that commonly promote the use or abuse of alcoholic beverages or drugs.

The response options, by item, that indicate the use of alcoholic beverages and drugs are as follows:

Item	Alcohol/Drug Response Option
1	c
2	b
3	e
4	a
5	f
6	c
7	d
8	b
9	e
10	a

HAVE A DRINK?

TYPE OF MEASURE: Affective

OUTCOME ASSESSED: Perceived Ability to Consume Alcohol Responsibly

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

This measure is designed to assess individuals' perceived self-efficacy in being able to use alcohol in a controlled, responsible manner. Individuals are presented with a series of items describing situations in which people often consume alcoholic beverages and asked to indicate if they think that they might drink in each situation. If they indicate that they might drink, then they are asked to estimate, on a 0 to 100 numerical scale, how confident they are that they can drink responsibly in that situation.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 282-284.

HAVE A DRINK?

This survey describes various times when people often drink alcoholic beverages such as beer, wine, or cocktails. Read each statement. Circle YES or NO to show if you might drink at that time. If you circle YES, then use the Confidence Scale to show how certain you are that you would drink responsibly. Responsible drinking consists of moderate controlled use of alcoholic beverages so that there is no risk of physical, mental, or social harm to yourself or others.

The following examples show how the Confidence Scale is used.

	SITUATION	MIGHT YOU DRINK?	IF YES, HOW CERTAIN ARE YOU THAT YOU WOULD DRINK RESPONSIBLY?
1.	You are at a New Year's Eve party and many people are drinking heavily.	[✓ YES]/NO	20
2.	You are at home alone watching television.	[✓ YES]/NO	70
3.	You don't feel well and you think you are ill because of something you ate.	YES/[✓ NO]	____

Confidence Scale

0	10	20	30	40	50	60	70	80	90	100
Very Uncertain					Somewhat Certain					Very Certain

	SITUATION	MIGHT YOU DRINK?	IF YES, HOW CERTAIN ARE YOU THAT YOU WOULD DRINK RESPONSIBLY?
1.	You have just returned home after a very busy day and you still feel very tense.	YES/NO	____

	SITUATION	MIGHT YOU DRINK?	IF YES, HOW CERTAIN ARE YOU THAT YOU WOULD DRINK RESPONSIBLY?
2.	You are at a party where most people are drinking.	YES/NO	_____
3.	A friend suggests that you meet for a drink at the end of the day.	YES/NO	_____
4.	You are unhappy about recent events in your life and you feel depressed.	YES/NO	_____
5.	You are having dinner with friends and they are encouraging you to drink.	YES/NO	_____
6.	You are waiting for some friends at a restaurant.	YES/NO	_____
7.	You are very bored during a long and dull weekend.	YES/NO	_____
8.	You are socializing with several good friends who are drinking heavily.	YES/NO	_____
9.	You are nervous about an important upcoming event.	YES/NO	_____
10.	You feel as though you need energy and a "lift" to get through a very demanding day.	YES/NO	_____
11.	You have just had a bitter quarrel with a close friend.	YES/NO	_____
12.	It has been a particularly warm day and you want to cool off.	YES/NO	_____
13.	You have been working for a long time and need to keep going.	YES/NO	_____
14.	You have been having a hard time sleeping.	YES/NO	_____

	SITUATION	MIGHT YOU DRINK?	IF YES, HOW CERTAIN ARE YOU THAT YOU WOULD DRINK RESPONSIBLY?
15.	You feel great and want to go out and have a good time.	YES/NO	______
16.	You are at a party and feel uncomfortable because you know very few of the guests.	YES/NO	______
17.	You feel lonely.	YES/NO	______
18.	You are out with friends celebrating a special occasion.	YES/NO	______
19.	You are anxious about starting a new and important assignment.	YES/NO	______
20.	You have just been told of the death of someone close to you.	YES/NO	______

INSTRUCTIONS FOR SCORING
HAVE A DRINK?

This inventory is scored by computing the mean strength of the rated confidence to drink responsibly. Compute the sum of the confidence ratings made in conjunction with a "YES" response. Divide this sum by the number of YES responses. The maximum score attainable of 100 reflects a strong perceived ability to use alcohol responsibly in all those situations where the respondent might drink.

If individuals provide confidence ratings for any situation to which they responded NO, omit those confidence ratings in the analysis.

WOULD YOU?

TYPE OF MEASURE: Affective

OUTCOME ASSESSED: Intention to Refrain from Using Alcoholic Beverages and/or Drugs

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

This measure is designed to assess the intention of respondents to refrain from using specific substances. Individuals are asked if they would use alcoholic beverages or specified drugs if they were offered some by a friend. They are to select the response that best describes their probable behavior.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 285-286.

WOULD YOU?

Various substances are listed below. For each one, circle the response that describes what you would do if you were at a friend's house and your friend offered you some.

YES = I would probably use it.
MAYBE = I am not sure if I would use it.
NO = I would probably not use it.

Please do not put your name on this survey. Your answers are strictly confidential.

Would you use ...

YES MAYBE NO 1. ... beer or wine?

YES MAYBE NO 2. ... hard liquor (vodka, gin, whiskey)?

YES MAYBE NO 3. ... marijuana (grass, hashish)?

YES MAYBE NO 4. ... psychedelics (LSD, PCP, peyote)?

YES MAYBE NO 5. ... amphetamines (speed, bennies)?

YES MAYBE NO 6. ... barbiturates (downers, sleeping pills)?

YES MAYBE NO 7. ... inhalants (glue, paint thinner)?

YES MAYBE NO 8. ... cocaine (coke)?

YES MAYBE NO 9. ... opiates (heroin, opium, methadone)?

INSTRUCTIONS FOR SCORING

WOULD YOU?

Point values are assigned to responses as follows:

YES = 0 points
MAYBE = 1 point
NO = 2 points

This inventory can be scored by adding the point value of every response and dividing this sum by the number of responses. The maximum score attainable of 2 points indicates a strong intention to refrain from using alcoholic beverages and specific drugs.

In addition to considering the overall score for this measure, separate scores can be computed for specific substances, or for alcoholic beverages and drugs, as follows:

Intention to Refrain from Using Alcoholic Beverages: Items 1

Intention to Refrain from Using Specific Drugs: Items 3-9

WHAT WOULD YOU DO?

TYPE OF MEASURE: Affective

OUTCOME ASSESSED: Intention to Refrain from Using Alcoholic Beverages and/or Drugs

TARGET POPULATION: Elementary school children

GENERAL DESCRIPTION:

This measure is designed to assess the intention of children to refrain from using specific substances. Children are asked if they would use specific alcoholic beverages or drugs if they were offered some by a friend. They are to select the response that best describes their probable behavior.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 287-288.

WHAT WOULD YOU DO?

Suppose that you are at a good friend's house and no one else is home. Your friend offers you one of the different things listed below. Would you use it? Circle an answer for each question.

YES = I would probably use it

MAYBE = I am not sure if I would use it

NO = I would probably not use it

Do not put your name on this paper.

Your answers will be a secret.

Would you use ...

YES MAYBE NO 1. ... beer?

YES MAYBE NO 2. ... wine?

YES MAYBE NO 3. ... hard liquor?

YES MAYBE NO 4. ... marijuana?

YES MAYBE NO 5. ... hashish?

YES MAYBE NO 6. ... LSD?

YES MAYBE NO 7. ... PCP?

YES MAYBE NO 8. ... speed (amphetamines)?

YES MAYBE NO 9. ... downers (barbiturates)?

YES MAYBE NO 10. ... glue?

YES MAYBE NO 11. ... cocaine?

YES MAYBE NO 12. ... heroin?

INSTRUCTIONS FOR SCORING

WHAT WOULD YOU DO?

Point values are assigned to responses as follows:

YES	=	0 points
MAYBE	=	1 point
NO	=	2 points

This inventory can be scored by adding the point value of every response and dividing this sum by the number of responses. The maximum score attainable of 2 points indicates a strong perceived intention to refrain from using alcoholic beverages and specific drugs.

In addition to considering an overall score for this measure, separate scores can be computed for specific substances or for alcoholic beverages and drugs, as follows:

Intention to Refrain from Using Alcoholic Beverages: Items 1-3

Intention to Refrain from Using Specific Drugs: Items 4-12

MY BODY

TYPE OF MEASURE: Affective

OUTCOME ASSESSED: Respect for One's Body

TARGET POPULATION: Elementary school children

GENERAL DESCRIPTION:

This measure is designed to assess children's respect for their bodies. Children are asked to indicate whether they would engage in activities which are healthful and avoid activities which are harmful to the body.

ADDITIONAL INFORMATION:

Test specifications for this measure can be found on pages 289-290.

MY BODY

Read each question. Then put a check (√) under the answer that best tells what you are willing to do to take care of your body.

In order to take care of your body, are you willing to ...	CERTAINLY YES	PROBABLY YES	MAYBE	PROBABLY NOT	CERTAINLY NOT
1. ... exercise several times each week?	___	___	___	___	___
2. ... never drink large amounts of alcohol?	___	___	___	___	___
3. ... do what your doctor tells you to do?	___	___	___	___	___
4. ... never smoke any cigarettes?	___	___	___	___	___
5. ... get immunizations against diseases?	___	___	___	___	___
6. ... get at least 8 hours of sleep every night?	___	___	___	___	___
7. ... see your doctor regularly?	___	___	___	___	___
8. ... not let yourself get too anxious?	___	___	___	___	___
9. ... be careful about what you eat?	___	___	___	___	___
10. ... never take drugs that are not necessary?	___	___	___	___	___

INSTRUCTIONS FOR SCORING

MY BODY

Point values are assigned to responses according to the following scoring key:

SCORING KEY

CERTAINLY YES = 5
PROBABLY YES = 4
MAYBE = 3
PROBABLY NOT = 2
CERTAINLY NOT = 1

This inventory can be scored by adding the point value of every response and dividing this sum by the number of responses. The maximum score attainable of 5 points indicates a strong respect for one's body, as evidenced by a willingness to engage in activities which are good for it and to avoid those which are not.

CHAPTER SIX

OTHER MEASURES

This chapter contains all of the previously developed measures that were located as a result of a comprehensive literature search and then identified as corresponding to one or more of the outcome statements listed in Chapter Four. The process by which existing measures were screened and selected is explained more completely in Chapter Two.

A descriptor page precedes each measure. This page indicates the *type of measure* (behavioral, knowledge, skill, or affective), the title of the *outcome assessed*, and the *target population* for the instrument. A *general description* is presented, providing an overview of the assessment strategy employed in the measure. The general description also provides information about the manner in which the instrument has previously been used. A *technical information* section summarizes any psychometric information that has been collected for the instrument. The measure's *author(s)* are listed. If there is any *additional information* available about a measure, reference citations are also given.

All of the measures in this chapter have been readied for possible photocopying. Directions to respondents and scoring instructions have been provided whenever they were available.

Before selecting any measures from this chapter, the following caution should be observed. In order to evaluate health education programs dealing with alcohol and substance abuse, it is often necessary to ask respondents about their own use of alcohol and drugs or about their views regarding such use. Although measuring instruments which include such questions in no way signify approval of drug use or alcohol consumption, those who are considering the use of these measures should recognize that some individuals, for example, parents of children who complete the measure, may believe that a measure implicitly sanctions the use of alcohol or drugs. Accordingly, such measures should not be employed indiscriminately, but with attentiveness to the way in which they will be viewed by others.

MICHIGAN ALCOHOLISM SCREENING TEST (MAST)

TYPE OF MEASURE: Behavioral

OUTCOME ASSESSED: Responsible Use of Alcoholic Beverages

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

The Michigan Alcoholism Screening Test or *MAST* was designed to provide a consistent, quantifiable, structured interview instrument to detect alcoholism. Individuals are presented with 24 questions describing circumstances often associated with the use of alcohol. Respondents are asked to answer yes or no to each question. Points are scored for alcoholic behavior (which may be a positive or negative response, depending on the question). Points are totalled and scores of five or more are said to indicate alcoholism.

TECHNICAL INFORMATION:

The MAST was administered to 501 male drivers who were divided into two groups according to their use of alcohol. Nearly half of the group consisted of individuals in alcoholism rehabilitation programs. The internal consistency reliability of the MAST for the entire sample was .95. The relationship between MAST scores and group status, that is, alcoholics verses nonalcoholics, resulted in a product-moment validity coefficient of .79. In a separate assessment of the instrument's validity, the same relationship was computed using only hospitalized alcoholics and drivers routinely renewing their licenses. The resulting validity coefficient was .90. A variety of ancillary analyses were carried out to study possible influences on the MAST's validity. These analyses tended to support the validity of the MAST.

AUTHOR: Melvin L. Selzer, M.D.
Private Practice, San Diego, California

ADDITIONAL INFORMATION:

Favazza, A.R., & Pires, J. The Michigan alcoholism screening test application in a general military hospital. *Quarterly Journal of Studies in Alcohol*, 1974, *35*, 925-929.

Selzer, M.L. The Michigan alcoholism screening test (MAST): the quest for a new diagnostic instrument. *American Journal of Psychiatry*, 1971, *3*, 176-182.

Selzer, M.L., Vinokur, A., & van Roorjen, L. A self-administered short version of the Michigan alcoholism screening test (MAST). *Journal of Studies on Alcohol*, 1975, *36*, 117-126.

Revised 8-25-80

MICHIGAN ALCOHOLISM SCREENING TEST (MAST)

		YES	NO
0.	Do you enjoy a drink now and then?	___	___
1.	Do you feel you are a normal drinker? (By normal we mean you drink less than or as much as most other people).	___	___
2.	Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening?	___	___
3.	Does your wife, husband, a parent, or other near relative ever worry or complain about your drinking?	___	___
4.	Can you stop drinking without a struggle after one or two drinks?	___	___
5.	Do you ever feel guilty about your drinking?	___	___
6.	Do friends or relatives think you are a normal drinker?	___	___
7.	Are you able to stop drinking when you want to?	___	___
8.	Have you ever attended a meeting of Alcoholics Anonymous (AA)?	___	___
9.	Have you gotten into physical fights when drinking?	___	___
10.	Has your drinking ever created problems between you and your wife, husband, a parent, or other relative?	___	___
11.	Has your wife, husband (or other family members) ever gone to anyone for help about your drinking?	___	___
12.	Have you ever lost friends because of your drinking?	___	___
13.	Have you ever gotten into trouble at work or school because of drinking?	___	___
14.	Have you ever lost a job because of drinking?	___	___

		YES	NO
15.	Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?	___	___
16.	Do you drink before noon fairly often?	___	___
17.	Have you ever been told you have liver trouble? Cirrhosis?	___	___
18.	After heavy drinking have you ever had Delirium Tremens (D.T.'s) or severe shaking, or heard voices or seen things that really weren't there?	___	___
19.	Have you ever gone to anyone for help about your drinking?	___	___
20.	Have you ever been in a hospital because of drinking?	___	___
21.	Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital where drinking was part of the problem that resulted in hospitalization?	___	___
22.	Have you ever been seen at a psychiatric or mental health clinic or gone to any doctor, social worker, or clergyman for help with any emotional problem, where drinking was part of the problem?	___	___
23.	Have you ever been arrested for drunk driving, driving while in toxicated, or driving under the influence of alcoholic beverages? (IF YES, How many times? ____)	___	___
24.	Have you ever been arrested, or taken into custody, even for a few hours, because of other drunk behavior? (IF YES, How many times? ____)	___	___

SCORING KEY

MICHIGAN ALCOHOLISM SCREENING TEST (MAST)

Points	Item	Points	Item
2	*1	2	13
2	2	2	14
1	3	2	15
2	*4	1	16
1	5	2	17
2	*6	2	**18
2	*7	5	19
5	8	5	20
1	9	2	21
2	10	2	22
2	11	2	***23
2	12	2	***24

* Alcoholic response is negative

** 5 points for Delirium Tremens

*** 2 points for each arrest

In general, five points or more would place the subject in an "alcoholic" category. Four points would be suggestive of alcoholism, three points or less would indicate the subject was not alcoholic.

Programs using the above scoring system find it very sensitive at the five point level and it tends to find more people alcoholic than anticipated. However, it is a screening test and should be sensitive at its lower levels.

THE MODIFIED MAST

TYPE OF MEASURE: Behavioral

OUTCOME ASSESSED: Responsible Use of Alcoholic Beverages

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

The Modified MAST includes the 24 questions from the original MAST describing circumstances often associated with the use of alcohol plus a newly generated set of parallel questions made by substituting the words "drugs" for "alcohol" and "drug user" for "drinker". Respondents are asked to answer yes or no to each question. Points are scored for behavior indicative of substance abuse. Points are totalled for odd numbered items to obtain a score for alcoholism and for even numbered items to obtain a score for drug abuse. Scores of five or more in either group are said to indicate a substance abuse problem.

TECHNICAL INFORMATION:

The Modified MAST was administered to approximately 400 subjects. On the basis of the alcohol items only, the false positives and false negatives were determined by reviewing hospital charts. There were no false negatives and only a one percent false positive rate. A similar analysis for the drug items yielded an identical absence of false positives but a 15 percent false negative rate.

AUTHORS: Armando R. Favazza, M.D.
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M. Barry Cannell, M.D.
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ADDITIONAL INFORMATION:

Cannell, M.B., & Favazza, A.R. Screening for drug abuse among college students: modification of the Michigan alcoholism screening test. Journal of Drug Education, 1978, 8 (2), 119-123.

THE MODIFIED MAST

Agency______________________________

Name______________________________ Age_____ Sex M F Current Date____________

Identifying Characteristics

Circle each question either Yes or No

*Drugs refer to marijuana, opiates or other narcotics, barbiturates or other sedative-hypnotics, amphetmaines or other related stimulants, or hallucinogens such as LSD.

1. Do you feel you are a normal drinker? YES NO
2. Do you feel you are a normal drug* user? YES NO
3. Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening before? YES NO
4. Have you ever awakened the morning after taking some drugs the night before and found that you could not remember a part of the evening before? YES NO
5. Does your spouse (or parents) ever worry or complain about your drinking? YES NO
6. Does your spouse (or parents) ever worry or complain about your drug use? YES NO
7. Can you stop drinking without a struggle after one or two drinks? YES NO
8. Can you stop taking a drug without a struggle after one or two times? YES NO
9. Do you ever feel bad about your drinking? YES NO
10. Do you ever feel bad about your drug use? YES NO
11. Do friends or relatives think you are a normal drinker? YES NO
12. Do friends or relatives think you are a normal drug user? YES NO

13.	Are you always able to stop drinking when you want to?	YES
14.	Are you always able to stop taking drugs when you want to?	YES
15.	Have you ever attended a meeting of Alcoholics Anonymous (AA) because of your own drinking?	YES
16.	Have you ever attended a meeting of Synanon or any other self-help drug group because of your own drug use?	YES
17.	Have you gotten into fights when drinking?	YES
18.	Have you gotten into fights while using drugs?	YES
19.	Has drinking ever created problems with you and your spouse?	YES
20.	Has taking drugs ever created problems with you and your spouse?	YES
21.	Has your spouse (or other family member) ever gone to anyone for help about your drinking?	YES
22.	Has your spouse (or other family member) ever gone to anyone for help about your drug use?	YES
23.	Have you ever lost friends or girlfriends/ boyfriends because of your drinking?	YES
24.	Have you ever lost friends or girlfriends/ boyfriends because of your drug use?	YES
25.	Have you ever gotten into trouble at work because of drinking?	YES
26.	Have you ever gotten into trouble at work because of drug use?	YES
27.	Have you ever lost a job because of drinking?	YES
28.	Have you ever lost a job because of drug use?	YES
29.	Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?	YES
30.	Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were taking drugs?	YES

31. Do you ever drink before noon? YES NO

32. Do you ever use drugs before noon? YES NO

33. Have you been told you have liver trouble? Cirrhosis? YES NO

34. Have you been told you have liver trouble? Hepatitis? YES NO

35. Have you ever had delirium tremens (DTs), severe shaking, heard voices, or seen things that weren't there after heavy drinking? YES NO

36. Have you ever had severe shaking, cramps, sweating, excessive nervousness, dizziness, trouble with your vision, nausea, vomiting, loss of sleep, convulsions, itching, diarrhea, chills, goose flesh, loss of energy, severe depression, "flashbacks," heard voices, or seen things that weren't there after heavy drug use? YES NO

37. Have you ever gone to anyone for help about your drinking? YES NO

38. Have you ever gone to anyone for help about your drug use? YES NO

39. Have you ever been in a hospital because of your drinking? YES NO

40. Have you ever been in a hospital because of your drug use? YES NO

41. Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital where drinking was part of the problem? YES NO

42. Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital where drug use was part of the problem? YES NO

43. Have you ever been seen at a psychiatric or mental health clinic, or gone to a doctor, social worker, or clergyman for help with an emotional problem in which drinking had played a part? YES NO

44. Have you ever been seen at a psychiatric or mental health clinic, or gone to a doctor, social worker, or clergyman for help with an emotional problem in which drug use had played a part? YES NO

45. a) Have you ever been arrested, even for a few hours, because of drunken behavior? YES NO

b) If yes, how many times? _____

46. a) Have you ever been arrested, even for a few hours, because of behavior due to drug use? YES NO

b) If yes, how many times? _____

47. a) Have you been arrested for drunken driving or driving after drinking? YES NO

b) If yes, how many times? _____

48. a) Have you ever been arrested for sale, possession, or use of drugs? YES NO

b) If yes, how many times? _____

SCORING KEY

MODIFIED MAST

Points			Points			
2	1.	No	2	25.	Yes	
2	2.	No	2	26.	Yes	
2	3.	Yes	2	27.	Yes	
2	4.	Yes	2	28.	Yes	
1	5.	Yes	2	29.	Yes	
1	6.	Yes	2	30.	Yes	
2	7.	No	1	31.	Yes	
2	8.	No	1	32.	Yes	
1	9.	Yes	2	33.	Yes	
1	10.	Yes	2	34.	Yes	
2	11.	No	2	35.	Yes	
2	12.	No	2	36.	Yes	
2	13.	No	5	37.	Yes	
2	14.	No	5	38	Yes	
5	15.	Yes	5	39.	Yes	
5	16.	Yes	5	40.	Yes	
1	17.	Yes	2	41.	Yes	
1	18.	Yes	2	42.	Yes	
2	19.	Yes	2	43.	Yes	
2	20.	Yes	2	44.	Yes	
2	21.	Yes	2	45.	Yes	(2 pts. for
2	22.	Yes	2	46.	Yes	each arrest)
2	23.	Yes	2	47.	Yes	(2 pts. for
2	24.	Yes	2	48.	Yes	each arrest)

THE INDEX OF UNCONTROLLED DRINKING

TYPE OF MEASURE: Behavioral

OUTCOME ASSESSED: Responsible Use of Alcoholic Beverages

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

The Index of Uncontrolled Drinking is designed to report individuals' loss of control when drinking. Individuals are asked to indicate if they have ever experienced any of ten circumstances indicative of irresponsible use of alcohol. If the individuals indicate "Yes", they are asked when they last experienced that particular situation. Respondents are then presented with two statements describing uncontrolled drinking and asked to indicate how often they experience that behavior. The measure appears in interview form and has been used as a self-report schedule to identify self-acknowledged problem drinkers or as a proxy interview where family members or friends identify drinking that is uncontrolled. Scoring procedures are simple. Respondents may be called problem drinkers if they answer "Yes" to at least two of the trouble items or "Frequently" to one or more of the loss of control questions.

This instrument is one of four scales known as the Iowa Alcoholic Stages Index designed to identify and categorize the variegated signs which mark an "alcoholic." The other subscales define trouble due to drinking, personal-effects of drinking, and preoccupation with alcohol. (For further explanation of these scales, see Hypothetical Case Histories, Instructions for Scoring, page 189.)

TECHNICAL INFORMATION:

A study was carried out with 2,440 new patients in Iowa Community Alcoholism Centers. The author reports that relationships between the total Alcoholic Stages Index (of which this measure is one scale) and several variables, e.g., years since first deliberate effort to quit drinking, were consistent with predictions.

AUTHOR: Harold A. Mulford
University of Iowa

ADDITIONAL INFORMATION:

Mulford, H.A. Stages in the alcoholic process; toward a cumulative, nonsequential index. Journal of Studies on Alcohol, March, 1977, 38 (3) 563-583.

Mulford, H.A. Alcoholics, alcoholism, and problem drinkers: social objects in the making. (National Center for Health Statistics, HEW, Unpub. Rep., Contract No. PH-86-65-91). University of Iowa, 1969.

THE INDEX OF UNCONTROLLED DRINKING*

Recommended interview schedule items for identifying problem drinkers and investigating problem drinking in survey samples of the general population.

INDICATORS	Yes	Last occurrence (year)	No
1. Has an employer ever fired you or threatened to fire you if you did not cut down or quit drinking?	...	...	...
2. Has your wife (husband) ever left you or threatened to leave you if you did not do something about your drinking?	...	...	...
3. Has your wife (husband) or other family member ever complained that you spend too much money for alcoholic beverages?	...	...	...
4. Have you ever been picked up or arrested by the police for intoxication or other charges involving alcoholic beverages?	...	...	...
5. Has a physician ever told you that drinking was injuring your health?	...	...	...
6. Have you ever had any illnesses brought on by your drinking?	...	...	...
7. Have you ever had any difficulty in meeting bills because too much money was spent on liquor?	...	...	...
8. Have you ever quit a job or changed jobs because you were in trouble or likely to get into difficulty due to drinking?	...	...	...
9. Have you ever had any accidents or injuries that could have been due to drinking?	...	...	...
10. Have you ever failed to do some of the things you should do - like keeping appointments, getting things done around home or attending to your job - because of drinking?	...	...	...
Do these statements describe your drinking?	Sometimes	Frequently	Never
11. Without realizing what I am doing, I end up drinking more than I had planned to.	...	...	...
12. Once I start drinking it is difficult for me to stop before I become completely intoxicated.	...	...	...

---

*A respondent may usefully be called a problem drinker if he gives a "Yes" response to at least two of the ten trouble items and reports this occurred during the past year, or if he answers "frequently" to either item 11 or 12.

STUDENT ALCOHOL BEHAVIOR QUESTIONNAIRE

TYPE OF MEASURE: Behavioral

OUTCOME ASSESSED: Responsible Use of Alcoholic Beverages

TARGET POPULATION: Adolescents

GENERAL DESCRIPTION:

The Student Alcohol Behavior Questionnaire is comprised of 23 questions that measure drinking-related behavior. The first six questions are used to determine the quantity and frequency of drinking. The remaining questions concern the frequency of problem behavior resulting from drinking. The situations are problems most likely encountered by adolescents or students. Respondents are asked to indicate the time span that most accurately describes the occurrence of these problems.

This measure is part of a set usually administered as an overall behavior/knowledge index. (See also Student Alcohol Knowledge Questionnaire, Engs, page 170.)

TECHNICAL INFORMATION:

The author reports a test-retest reliability coefficient .79 for 122 subjects who completed the instrument.

AUTHOR: Ruth C. Engs, R.N., Ed.D.
Indiana University

ADDITIONAL INFORMATION:

Engs, R.C. Drinking patterns and drinking problems of college students. Journal of Studies on Alcohol, 1977, 38 (11), 2144-2156.

Engs, R.C. Let's look before we leap: the cognitive and behavioral evaluation of a university alcohol education program. Journal of Alcohol and Drug Education, 1977, 22 (2), 39-48.

STUDENT ALCOHOL BEHAVIOR QUESTIONNAIRE

by Ruth C. Engs
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Printed in U.S.A., Ruth C. Engs, Bloomington, Indiana

Please go to IBM sheet No. 1 and answer these questions on it.

We will be asking you about your current drinking patterns.

1. Let's first take beer. How often, on the average, do you *usually* have a beer? (If you do not drink beer at all, go to question 3)
   a. every day
   b. at least once a week but not every day
   c. at least once a month but less than once a week
   d. more than once a year but less than once a month
   e. once a year or less
2. When you drink beer, how much, on the average, do you *usually* drink at any one time?
   a. more than 1 six pack (6 or more cans or tavern glasses)
   b. 5 or 6 cans of beer or tavern glasses
   c. 3 or 4 cans of beer or tavern glasses
   d. 1 or 2 cans of beer or tavern glasses
   e. less than 1 can of beer or tavern glass
3. Now let's look at table wine. If you do not drink wine at all, go to question 5. How often do you *usually* have wine?
   a. every day
   b. at least once a week but not every day
   c. at least once a month but less than once a week
   d. more than once a year but less than once a month
   e. once a year or less
4. When you drink wine how much, on the average, do you *usually drink at any one time?*
   a. over 6 wine glasses
   b. 5 or 6 wine glasses
   c. 3 or 4 wine glasses
   d. 1 or 2 wine glasses
   e. less than 1 wine glass of wine
5. Next we would like to ask you about liquor or spirits (whiskey, gin, vodka, mixed drunks, etc.). If you do not drink liquor at all, go to page 4. How often do you *usually* have a drink of liquor?
   a. every day
   b. at least once a week but not every day
   c. at least once a month but less than once a week
   d. more than once a year but less than once a month
   e. once a year or less
6. When you drink liquor how many, on the average, drinks do you *usually* drink at any one time?
   a. over 6 drinks
   b. 5 or 6 drinks
   c. 3 or 4 drinks
   d. 1 or 2 drinks
   e. less than 1 drink

The following are common results of drinking that other students have reported. If you have never had a drink at all go to next section. If you currently drink or have drunk in the past put the letter corresponding to the *frequency* of the occurences in the blank on your IBM answer sheet.

a. at least once during the past two months and at least one additional time during the past year.
b. at least once within the past two months but not during the rest of this past year.
c. not during the past two months but at least once during the past year.
d. has happened at least once in my life but not during the past year.
e. has not happened to me.

---

7. have had a hangover
8. have gotten nauseated and vomited from drinking
9. driven a car *after* having several drinks
10. driven a car when you know you have had too much to drink
11. drinking *while* driving a car
12. come to class after having several drinks
13. "cut a class" after having several drinks
14. missed a class because of a hangover
15. arrested for DWI (Driving While Intoxicated)
16. been criticized by someone you were dating because of your drinking
17. trouble with the law because of drinking
18. lost a job because of drinking
19. got a lower grade because of drinking too much
20. gotten into trouble with the school administration because of behavior resulting from drinking too much
21. gotten into a fight after drinking
22. thought you might have a problem with your drinking
23. damaged property, pulled false fire alarm, or other such behavior after drinking

CURRENT DRUG USAGE QUESTIONNAIRE

TYPE OF MEASURE: Behavioral

OUTCOME ASSESSED: Refraining from the Use of Alcohol and/or Drugs

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

The Current Drug Usage Questionnaire is designed to measure the frequency of individuals' current drug and alcohol use. Respondents are presented with 13 drug categories including alcohol, caffeine, glue, and nicotine, as well as commonly used illicit drugs, then asked to indicate how often each drug is currently used. Response options are (1) Daily, (2) Weekly, (3) Monthly, (4) Less Than Once a Month, and (5) Never.

This measure is one of the methods Jackson used to identify drug usage frequency and severity. Other methods asked about the subjects' expected drug usage in a year and expected drug usage in their lifetime, (see also Future Drug Usage Questionnaire, Jackson, page 198) as well as their friends' current and expected drug usage.

TECHNICAL INFORMATION:

Internal consistency estimates for subgroups of items within this measure, based on responses of 45 subjects, were generally in the .85 to .95 range. An exception was noted in items concerning the use of caffeine, with the internal consistency estimate dropping to .26.

AUTHOR: Javon Jackson
Palo Alto, California

ADDITIONAL INFORMATION:

Jackson, J. An evaluation of the students, teachers, and residents involved in drug education (S.T.R.I.D.E.) program. Unpublished doctoral dissertation, Michigan State University, 1975.

Please indicate below how frequently you currently use the following drugs.

	1	2	3	4	5
DRUGS	DAILY	WEEKLY	MONTHLY	LESS THAN ONCE A MONTH	NEVER
GLUE					
AMPHETAMINES diet pills, speed, (uppers)					
ALCOHOL					
NICOTINE cigarettes, cigars, pipes					
BARBITURATES HYPNOTICS (Downers except Methaqualones)					
METHAQUALONES					
TRANQUILIZERS					
OPIATES heroin, morphine					
COCAINE					
CAFFEINE coffee, tea					
HALLUCINOGENS (LSD, STP, PCP) mescaline					
MARIJUANA					

DRUG USE CHECKLIST

TYPE OF MEASURE: Behavioral

OUTCOME ASSESSED: Refraining from the Use of Alcohol and/or Drugs

TARGET POPULATION: Age 9 to Adult

GENERAL DESCRIPTION:

The *Drug Use Checklist* is designed to measure the frequency of drug and alcohol consumption during the past three months. Respondents are presented with 12 categories of licit and illicit drugs including one bogus item (Cadrines), then asked to mark an x in the box which indicates how often the drugs were used. The boxed frequency intervals include "not at all", "once or twice", "1-3 times a month", "1-3 times a week", "4-6 times a week", and "daily". The non-existent drug, Cadrines, is included to help identify false responses. The author suggests that the data on individuals who indicate the use of this drug be discarded and that an entire data set is suspect if a high percentage of respondents (above 20%) check this category.

TECHNICAL INFORMATION:

Although the instrument has been described as highly similar to a reliable and noted inventory used in military research, there are no reliability or validity data available for this checklist.

AUTHORS: Dr. Roger F. Cook, et al.
Institute for Social Analysis, Reston, Virginia

ADDITIONAL INFORMATION:

Cook, R.F., Theologus, G.C., Roehl, J., Lambert U., & Brahlek, R. *Phase I final report on development of evaluation instruments for drug abuse prevention programs*. McLean, Virginia: BRX Incorporated. Reston, Virginia: Institute for Research, 1976.

DRUG USE CHECKLIST

Instructions: To the right of each group of drugs please put an X in the box which tells how often you have used those drugs in the past 3 months without a doctor's orders. Please answer every row and put only one X in each row. If you took some of these drugs during only a part of the last 3 months, put down how often you took them during that period when you were taking them. Feel free to explain your answers at the bottom of the page. Please answer honestly and be sure not to put your name on this paper.

	not at all	once or twice	one to 3 times a month	one to 3 times a week	4 to 6 times a week	daily
Caffeine - Coffee, cola drinks, No-Doz, etc.						
Tobacco						
Beer or wine						
Hard liquor						
Inhaled Solvents - Glue, gasoline, paint thinner, cleaning fluid, lighter fluid, etc.						
Stimulants - Amphetamines, dexedrine, benzedrine, diet pills, speed, uppers, pep pills, etc.						
Depressants - Downers, seconal, amytal, barbiturates, phenobarb, tranquilizers, etc.						
Marijuana - Grass, pot, hashish, etc.						
Hallucinogens - STP, LSD, psilocybin, mescaline, peyote, etc.						
Opiates - Heroin, morphine, etc.						
Cocaine						
Cadrines						

STUDENT ALCOHOL KNOWLEDGE QUESTIONNAIRE

TYPE OF MEASURE: Knowledge

OUTCOME ASSESSED: Consequences of Alcohol and Drug Use

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

The Student Alcohol Knowledge Questionnaire measures respondents' knowledge about alcohol. The instrument is comprised of 36 true/false questions about the effects of alcohol, consequences of alcohol use, and facts about alcohol and alcoholic beverages. Each question has three answer choices: true, false, don't know. Respondents are informed that if they do not know the answer, they should not guess.

This measure is part of a set usually administered as an overall behavior/knowledge index. (See also Student Alcohol Behavior Questionnaire, Engs, page 164.)

TECHNICAL INFORMATION:

The author reports an internal consistency reliability coefficient of .79 for this measure based on its administration to 1,128 subjects

AUTHOR: Ruth C. Engs, R.N., Ed.D.
Indiana University

ADDITIONAL INFORMATION:

Engs, R.C. College students' knowledge of alcohol and drinking. Journal of the American College Health Association, February 1978, 26 (4), 189-193.

Engs, R.C. Let's look before we leap: the cognitive and behavioral evaluation of a university alcohol education program. Journal of Alcohol and Drug Education, 1977, 22 (2), 39-48.

ALCOHOL KNOWLEDGE QUESTIONNAIRE

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iana

WE WOULD NOW LIKE TO ASK YOU SOME NFORMATION ABOUT ALCOHOL

The questions will either be TRUE OR FALSE. If ou do not know the answer to the question DO NOT GUESS. Mark a line in space "E".

If you think the answer is TRUE, mark the "a" for true.

If you think the answer is FALSE, mark the "b" for false.

If you do not know the answer mark the "e".

Mark on your IBM answer sheet #2 beginning with uestion 1.

1. Drinking milk before drinking an alcoholic beverage will slow down the absorption of alcohol into the body.
2. Wines are made by fermenting grains.
3. Alcoholic beverages do not provide weight increasing calories.
4. In America drinking is usually considered an important socializing custom in business, for relaxation and for improving interpersonal relationships.
5. Gulping of alcoholic beverages is a commonly accepted drinking pattern in this country.
6. Alcohol is usually classified as a stimulant.
7. Alcohol is not a drug.
8. A blood alcohol concentration of 0.1% is the legal definition of alcohol intoxication in most states in regards to driving.
9. Approximately 10% of fatal highway accidents are alcohol related.
10. Alcohol was used for centuries as a medicine in childbirth, sedation, and surgery.
11. Table wines contain from 2-12% alcohol by volume.
12. It is estimated that approximately 85% of the adult Americans who drink misuse or abuse alcoholic beverages.
13. Many people drink to escape from problems, loneliness, and depression.
14. Liquor mixed with soda pop will affect you faster than liquor drunk straight.
15. The most commonly drunk alcoholic beverages in the United States are distilled liquors (whiskey, gin, vodka).
16. A 150 pound person, to keep his blood alcohol concentration below the legally intoxicated level, would have to drink less than 3 beers in an hour.
17. A person cannot become an alcoholic by just drinking beer.
18. To prevent getting a hangover one should sip his drink slowly, drink and eat at the same time, space drinks over a period of time, and don't ever drink for your limit.
19. Responsible drinking can result in relaxation, enhanced social interactions, and a feeling of well-being.
20. Distilled liquors (gin, whiskey, vodka, etc.) usually contain about 15-20% alcohol by volume.
21. Moderate consumption of alcoholic beverages is generally *not* harmful to the body.
22. It takes about as many hours as the number of beers drunk to completely burn up the alcohol ingested.
23. An ounce of whiskey contains about 60 calories.
24. Many people drink for social acceptance, because of peer group pressures, and to gain adult status.
25. A blood alcohol concentration of .02 usually causes a person to be in a stupor.
26. Liquors such as gin, scotch, and whiskies are usually distilled from mashes made from fermenting grains.
27. Proof on a bottle of liquor represents half the per cent of alcohol contained in the bottle.
28. The United States lacks a national consensus on what constitutes the responsible use of alcoholic beverages.
29. There is usually more alcoholism in a society which accepts drunken behavior than in a society which frowns on drunkenness.
30. Beer usually contains from 2-12% alcohol by volume.
31. Eating while drinking will have no effect on slowing down the absorption of alcohol in the body.
32. Drinking coffee or taking a cold shower can be an effective way of sobering up.
33. Wines throughout history have been commonly drunk at religious ceremonies and family gatherings.
34. Drinking of alcoholic beverages has been common in the U.S.A. since the Puritans first settled here.
35. Alcohol has only been used in a very few societies throughout history.
36. Liquor taken straight will affect you faster than liquor mixed with water.

SCORING KEY

STUDENT ALCOHOL KNOWLEDGE QUESTIONNAIRE

1. T
2. F
3. F
4. T
5. F
6. F
7. F
8. T
9. F
10. T
11. T
12. F
13. T
14. F
15. F
16. T
17. F
18. T
19. T
20. F
21. T
22. T
23. F
24. T
25. F
26. T
27. F
28. T
29. T
30. T
31. F
32. F
33. T
34. T
35. F
36. T

PENNSYLVANIA STATE DRUG KNOWLEDGE SCALE

TYPE OF MEASURE: Knowledge

OUTCOME ASSESSED: Consequences of Alcohol and Drug Use

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

The Drug Knowledge Scale is designed to measure individuals' knowledge about drugs. The instrument is comprised of 41 multiple-choice items focusing on five types of commonly used drugs: marijuana, hallucinogens, stimulants, depressants, and opiates. Respondents are asked to mark the correct answer for each item. Scores are obtained by counting the number of items answered correctly.

This knowledge measure is one in a series of scales including measures of drug use, drug attitudes, and law and society known as the Pennsylvania State University Evaluation Scales. The scales are designed for use independently or in conjunction with one another depending on program objectives.

TECHNICAL INFORMATION:

An attempt was made to support the measure's content validity by including approximately the same number of items for each drug category. The authors report that construct and criterion-related validity are supported by (1) higher scores in user than non-user groups and (2) a slight but significant correlation ($r = .26$) between scores in the scale and grade-point averages. Internal consistency reliability coefficients on the measure are reported to have exceeded .80.

AUTHORS: John D. Swisher and John J. Horan
Pennsylvania State University

ADDITIONAL INFORMATION:

Swisher, J.D., & Horan, J.J. Pennsylvania State University evaluation scales. In L.A. Abrams, E.F. Garfield, & J.D. Swisher (Eds.), Accountability in drug education. Washington, D.C.: The Drug Abuse Council, Inc., 1973.

PENNSYLVANIA STATE
DRUG KNOWLEDGE SCALE

Developed by John D. Swisher and John J. Horan

1. Which of the following is not a name for marijuana?
   a. cannabis
   b. grass
   c. joint
   d. pan
   e. reefer
2. LSD can be detected by:
   a. its smell
   b. its taste
   c. its color
   d. its size
   e. none of the above
3. Amphetamines are:
   a. stimulants
   b. depressants
   c. physically addicting
   d. narcotics
4. Which of the following is not a tranquilizer:
   a. thorazine
   b. compazine
   c. methedrine
   d. stelazine
5. Codeine is used medically to:
   a. help people relax
   b. help relieve pain
   c. help people sleep
   d. help people become alert

6. A person who uses marijuana a lot may:

   a. become addicted
   b. use more in order to feel the effects
   c. think he can't get along without it
   d. try heroin

7. Some research with white blood cells tends to indicate that LSD:

   a. dissolves chromosomes
   b. destroys vision
   c. causes chromosomal mutations
   d. causes chromosomes to break

8. Which of the following is not a stimulant:

   a. benzedrine
   b. methedrine
   c. resperpine
   d. amphetamine

9. The term "speed" refers to

   a. barbiturates
   b. amphetamines
   c. marijuana
   d. LSD
   e. narcotics

10. A drug user who increased the amount of a drug in order to obtain the same effect is developing a(n):

    a. physical dependency
    b. tolerance
    c. addiction
    d. psychological dependency

11. Hashish is a(n):

    a. concentrated form of opium
    b. amphetamine
    c. concentrated form of marijuana
    d. physically addicting drug

12. LSD is sometimes referred to as:

    a. pot
    b. cube
    c. speed
    d. zap

13. Amphetamines are sometimes called:

    a. red-devils
    b. goof-balls
    c. yellow-jackets
    d. pep pills

14. Barbiturates are sometimes called:

    a. pep-pills
    b. goof-balls
    c. truck drivers
    d. pep pills

15. Marijuana grows in the climate of:

    a. Africa
    b. South America
    c. Northeastern United States
    d. all of the above

16. Peyote is a(n):

    a. mushroom
    b. small cactus
    c. root
    d. herb

17. Extensive use of barbiturates may cause:

    a. needing more to feel the effects
    b. a feeling that you can't get along without it
    c. a physical addiction
    d. all of the above

18. The effects of a drug on a person are a result of:

    a. previous experience with the drug
    b. the amount of drug taken
    c. the person's unique personality
    d. all of the above

19. Which of the following is non-addicting:

    a. codeine
    b. barbiturates
    c. marijuana
    d. heroin

20. Benzedrine and dexedrine are:

    a. depressants
    b. amphetamines
    c. narcotics
    d. barbiturates

21. Barbiturates are:

    a. stimulants
    b. depressants
    c. non-addicting
    d. available without prescription

22. The fastest way to feel the effects of marijuana is by:

    a. smoking it in a cigarette
    b. inhalation of fumes
    c. eating it in a capsule
    d. injecting it in a blood vessel

23. LSD can cause:

    a. blindness
    b. deafness
    c. hallucinations
    d. all of the above

24. Which of the following has the least potential for psychological dependence:

    a. cannabis
    b. dexedrine
    c. doriden
    d. alcohol

25. Which of the following is not a long-term effect of narcotic use:

    a. loss of appetite and weight
    b. impotence
    c. sterility
    d. high blood pressure

26. Which is the most powerful of the hallucinogens:

    a. peyote
    b. marijuana
    c. LSD
    d. mescaline

27. Continual use of amphetamines can lead to:

    a. physical dependence
    b. tolerance
    c. psychological dependence
    d. all of the above are possible outcomes of continual use

28. Which of the following drugs has the highest death rate upon withdrawal from physical dependence?

    a. heroin
    b. amphetamines
    c. barbiturates
    d. cocaine

29. Demerol is a(n):

    a. artificial narcotic
    b. stimulant for low blood pressure
    c. mild tranquilizer
    d. ingredient in many cough medicines

30. One effect that marijuana does not result in:

    a. decreased appetite
    b. feeling of elation
    c. change of perception
    d. impairment of judgment and coordination

31. Use of LSD does not result in:

    a. a psychotic episode
    b. "flashbacks"
    c. increased intelligence
    d. severe anxiety reactions

32. Which of the following would be most dangerous to consume while barbiturates are in one's system:

    a. marijuana
    b. amphetamines
    c. alcohol
    d. LSD

33. Tincture of opium is medically used for:

    a. stomach upset
    b. depressed persons
    c. increasing activity level
    d. it is never used medically

34. The effects of marijuana are most similar to:

    a. heroin
    b. amphetamines
    c. morphine
    d. LSD

35. Which of the following is not considered to be an hallucinogen:

    a. marijuana
    b. LSD
    c. DMT
    d. SDC

36. Which of the following is the least likely to cause death upon use of an overdose:

    a. heroin
    b. barbiturates
    c. amphetamines
    d. morphine

37. Under the Federal law barbiturates are classified as follows:

    a. high potential for abuse, some medical use
    b. high potential for abuse, no medical use
    c. dangerous drug
    d. narcotic

38. Which of the following does not produce physical dependency?

    a. morphine
    b. cocaine
    c. codeine
    d. heroin

39. Heroin is typically:

    a. smoked
    b. eaten
    c. injected into a vein
    d. injected into an artery

40. Marijuana is legally classified by the federal government in the following way:

    a. high potential for abuse, some medical use
    b. high potential for abuse, no medical use
    c. hallucinogen
    d. narcotic

41. Medically speaking LSD is called an hallucinogen but legally speaking it is referred to as follows:

    a. high potential for abuse, no medical use
    b. opiate
    c. high potential for abuse, some medical use
    d. depressant

SCORING KEY

PENNSYLVANIA STATE DRUG KNOWLEDGE SCALE

1. D
2. E
3. A
4. C
5. B
6. C
7. C
8. C
9. B
10. B
11. C
12. B
13. D
14. B
15. D
16. B
17. D
18. D
19. C
20. B
21. B.
22. A
23. C
24. A
25. C
26. C
27. C
28. C
29. A
30. A
31. C
32. C
33. A
34. D
35. D
36. C
37. A
38. B
39. C
40. B
41. C

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OVERDOSE TREATMENT QUESTIONNAIRE

TYPE OF MEASURE: Knowledge

OUTCOME ASSESSED: Danger Signs and Variables Leading to Alcoholism or Substance Abuse

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

The Overdose Treatment Questionnaire measures respondents' knowledge of physical and psychological signs indicative of excess drug or alcohol consumption. Respondents are presented with 30 multiple choice items and asked to select the appropriate answer from five choices. Each question has only one correct answer. This measure has been used to instruct trainees in administering drug overdose aid in emergency situations and as part of a drug education program to measure respondents' knowledge of the effects of drugs on users.

TECHNICAL INFORMATION:

The internal consistency reliability of this measure (Hoyt's analyses of variance) based on responses of 45 subjects was .34.

AUTHOR: Dr. Javon Jackson
Palo Alto, California

ADDITIONAL INFORMATION:

Jackson, J. An evaluation of the students, teachers, and residents involved in drug education (S.T.R.I.D.E.) program. Unpublished doctoral dissertation, Michigan State University, 1975.

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Overdose Treatment Questionnaire

1. Treatment for brain damage victims involves

    a. Keeping the victim warm and lying down with his head elevated
    b. giving the victim liquids
    c. taking convulsion precautions, and moving with great care
    d. A and C
    e. A, B, and C

2. In the treatment of blood clots, one should

    a. elevate the body part and apply pressure to keep the clot from moving
    b. the vein can be ligated where serious danger of clot moving occurs
    c. apply ice to hurry healing and keep up treatment until clot has scarred into place
    d. A and B
    e. A, B, and C

3. Which is not a hallucinogen that mixes up the brain's chemical signals?

    a. LSD
    b. STP
    c. Glue
    d. Marijuana
    e. C and D

4. If one suffers from sedative confusion, he does not

    a. appear drunk
    b. close his memory
    c. regress in behavior (act much younger)
    d. vigorously move or run around the area
    e. stop breathing

5. What type of blood poisoning carries surface germs throughout the body due to improper injection techniques?

    a. hepatitus
    b. abscess
    c. sterile abscess
    d. septicemia
    e. none of the above

6. Which of the following statement(s) is (are) true?

   a. Infected blood clots cause heart attacks.
   b. Uninfected blood clots cause heart attacks.
   c. Uninfected blood clots cause strokes.
   d. A and C
   e. B and C

7. In opium confusion, the subject is rarely

   a. laughing or overly happy
   b. careless
   c. hurt without any warning pain
   d. sleepy
   e. violent or dangerous

8. In the treatment for opium confusion, do not

   a. try to keep subject quiet
   b. give stimulants such as coffee, tea, or tobacco
   c. give a sedative
   d. give alcohol
   e. C and D

9. A shock victim does not have

   a. a cold sweat
   b. a weak pulse
   c. a rapid pulse
   d. low blood pressure
   e. high blood pressure

10. In opiate overdose, the victim does not

    a. fall into a deep sleep
    b. have pinpointed pupils
    c. have pupils that will not change in light
    d. have a slow pulse
    e. breath very slowly

11. Anesthesia may be caused by

    a. alcohol
    b. barbiturates
    c. heroin
    d. B and C
    e. all of the above

12. Which of the following is not a myth about alcohol?

    a. alcohol is a stimulant
    b. a little drinking doesn't affect one's driving
    c. a drink or two will improve one's skill
    d. alcohol warms the body
    e. there are not any quick methods for sobering up

13. Which of the following is not a myth about alcohol?

    a. alcohol acts as an aphrodisiac and increases sexual prowess
    b. alcohol does not affect adults and teen-agers alike
    c. eating can prevent drunkenness
    d. mixing drinks causes drunkenness
    e. drunks belong in jail

14. Which of the following is a myth about alcohol?

    a. once the alcoholic becomes sensitive or addicted to alcohol, he does not have to remain addicted throughout life
    b. approximately one out of fifteen drinkers become alcoholics
    c. the length of time it may take for the disease to develop varies considerably from person to person
    d. denying alcoholism is as much a part of the disease as drinking
    e. alcohol alone does not cause alcoholism

15. Which of the following diseases can be transmitted through dried blood from dirty injection equipment?

    a. malaria
    b. syphillis
    c. serum hepatitus
    d. A and C
    e. all of the above

16. The fastest drug that can stop breathing is

    a. Freon
    b. Glue
    c. Heroin
    d. Barbiturates
    e. Alcohol

7. Cardiac massage should not be considered when

    a. the victim has stopped breathing
    b. no pulse is found in wrist, neck, or groin
    c. no sound can be heard with the ear directly over the heart
    d. pupils are pinpointed
    e. pupils are dilated

8. In cases of overdose by mouth, there is no need to

    a. find out what drug it is
    b. determine whether the drug was in liquid, solid, pill, or capsule form
    c. induce vomiting if stimulants are involved

d. induce vomiting if barbiturates are involved
e. dilute the drug with water

19. Symptoms of brain hemorrhage can be all of the following except

a. unequal pupils
b. slow breathing
c. unequal reflexes
d. paralyzed limbs
e. abnormal reflexes

20. In the treatment of stroke-like complications, the helper should not

a. treat for shock
b. consider alcohol sedation
c. move to a hospital as soon as possible
d. give artificial respiration if necessary
e. watch for convulsions

21. Treatment of sedative overdose does not require

a. treatment for shock
b. monitoring of life signs
c. keeping subject awake
d. artificial respiration if necessary
e. hospital care as soon as possible

22. Which of the following is not true of severe opium overdose?

a. the victim has a difficult time trying to fall back to sleep
b. breathing decreases
c. heart action decreases
d. death can come rapidly and without warning
e. pupils are pinpointed

23. In severe opiate overdose, the helper should not

a. let the victim sleep it off
b. monitor life signs
c. keep subject stimulated if "on the nod"
d. use caffeine and nicotine
e. apply artificial respiration if necessary

24. Which of the following does not cause any serious body dependency?

a. codeine
b. tranquilizers
c. barbiturates
d. LSD
e. amphetamines

25. Crashing from amphetamines causes

a. the victim to feel very tired
b. a hopeless mental attitude
c. serious changes in blood pressure
d. a slow pulse
e. all of the above

26. Which of the following cannot as a rule cause convulsions?

a. LSD
b. benzedrine
c. amphetamines
d. strychnine
e. mescaline

27. Which of the following is most likely to cause convulsions?

a. strychnine
b. psilocybin
c. marijuana
d. THC
e. opiates

28. The unconscious state of hyperventilation is not accompanied by

a. collapsed lungs
b. muscle shakes
c. signs much like nerve damage due to the chemical changes in the blood
d. headaches
e. a sensation of not being able to get a deep breath

29. In transporting overdose victims to a treatment facility, the trained helper should not

a. tell the subject what you are going to do
b. use conventional cars where possible
c. use ambulances, medical paraphenalia, sirens if at all possible
d. transport subjects in rear seat of the vehicle
e. have people with the subject in the rear seat

30. Convulsion treatment should not include

a. using an object to prevent the mouth from closing, that will not damage the teeth
b. tilting the head so that the throat will empty
c. restricting movement of limbs to prevent injury
d. using stimulants as a reliable anticonvulsant for conscious victims
e. all of the above

SCORING KEY

OVERDOSE TREATMENT QUESTIONNAIRE

1. D
2. D
3. C
4. D
5. D
6. E
7. E
8. E
9. E
10. D
11. E
12. E
13. B
14. A
15. E
16. A
17. D
18. C
19. B
20. B
21. A
22. A
23. A
24. D
25. E
26. A
27. A
28. A
29. C
30. D

HYPOTHETICAL CASE HISTORIES

TYPE OF MEASURE: Skill

OUTCOME ASSESSED: Techniques of Responsible Alcohol Use

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

This set of hypothetical case histories represents a variety of patterns of drinking behavior, attitudes, and consequences. Each case history systematically varies four kinds of phenomena indicative of alcoholism: preoccupation with alcohol, alcohol use for personal effects, trouble due to drinking, and quantity-frequency of consumption. Four questions appear after each case. Respondents are asked to indicate which label, (1) an alcoholic, (2) a problem drinker, (3) a heavy drinker, or (4) a social drinker, they consider appropriate based on the variables presented. Respondents are then asked to indicate whether or not the person should seek help for his drinking, be pressured to seek help, or be committed for help. Since there is no standardized set of diagnostic criteria to define an alcoholic, the most appropriate label and reaction is subject to personal interpretation, thus facilitating program discussion. This instrument may also be used to measure the respondents' ability to identify correctly the absence or presence of each of the four alcoholism indicators mentioned above.

TECHNICAL INFORMATION:

The case histories were presented to (1) a sample of 66 alcoholism experts, (2) 237 community service professionals, and (3) a representative sample of 110 people from the general population. There was substantial agreement within and between the three groups of judges (86%-95%) with respect to their ability to label the nature of the drinking behavior described.

AUTHOR: Harold A. Mulford
University of Iowa

ADDITIONAL INFORMATION:

Mulford, H.A. Stages in the alcoholic process; toward a cumulative, nonsequential index. Journal of Studies on Alcohol, March, 1977, 38 (3) 563-583.

Mulford, H.A. Alcoholics, alcoholism, and problem drinkers: social objects in the making. (National Center for Health Statistics, HEW, Unpub. Rep., Contract No. PH-86-65-91). University of Iowa, 1969.

HYPOTHETICAL CASE HISTORIES

Mr. Albert has a drink or two about three or four times each week. He becomes intoxicated about once every two or three weeks, sometimes to the point of staggering and slurred speech. He always sobers up the next day. His drinking never interferes with regular meals. He can always recall what happened during an evening of drinking.

Although he enjoys drinking, drinking has no great effect upon how he feels about himself, or how he feels in the compnay of others, or his general outlook on life.

His drinking has not led to any trouble with the police; nor has it affected his job or caused him other problems.

1. Would you say Mr. Albert is: (CHECK ONLY ONE)
   (1)_____an alcoholic.
   (2)_____a problem drinker.
   (3)_____a heavy drinker.
   (4)_____a social drinker

2. Should Mr. Albert seek help for his drinking? ____Yes ____No

3. Should Mr. Albert be pressured to seek help? ____Yes ____No

4. If he refuses to do anything, should he be committed for help? ____Yes ____No

* * * * *

Mr. Lane often has a drink or two at lunch, two or three more in the afternoon, and a few more in the evening. He sometimes becomes unsteady on his feet, but rarely staggers or has slurred speech. He hardly ever misses meals because of drinking and can always recall the events of the preceding evening.

He enjoys drinking and finds that it makes him feel more satisfied with himself, more self confident, more at ease with other people, and generally provides him a more desirable outlook on life.

Within the past year he has been picked up by the police a couple of times, once for drunken driving and once for public intoxication. He recently changed jobs and has had other difficulties associated with drinking.

1. Would you say Mr. Lane: (CHECK ONLY ONE)
   (1)_____an alcoholic.
   (2)_____a problem drinker.
   (3)_____a heavy drinker.
   (4)_____a social drinker.

2. Should Mr. Lane seek help for his drinking? ____Yes ____No

3. Should Mr. Lane be pressured to seek help? ____Yes ____No

4. If he refuses to do anything, should he be committed for help? ____Yes ____No

Mr. Fry becomes intoxicated (staggers, slurred speech, etc.) once or twice a week. Before going to a party he takes a few quick ones to make sure he has enough. When drinking he often fails to eat. Sometimes he is unable to recall events of the preceding evening.

Although he enjoys drinking, drinking has no great effect upon how he feels about himself, or how he feels in the company of others, or his general outlook on life.

Within the past year he has been picked up by the police a couple of times, once for drunken driving and once for public intoxication. He recently changed jobs and has had other difficulties associated with drinking.

1. Would you say Mr. Fry is: (CHECK ONLY ONE)
   (1) ______ an alcoholic.
   (2) ______ a problem drinker.
   (3) ______ a heavy drinker.
   (4) ______ a social drinker.

2. Should Mr. Fry seek help for his drinking? ____ Yes ____ No

3. Should Mr. Fry be pressured to seek help? ____ Yes ____ No

4. If he refuses to do anything, should he be committed for help? ____ Yes ____ No

* * * * *

Mr. Keith often has a drink or two at lunch, two or three more in the afternoon, and a few more in the evening. He sometimes becomes unsteady on his feet, but rarely staggers or has slurred speech. He hardly ever misses meals because of drinking and can always recall the events of the preceding evening.

He enjoys drinking and finds that it makes him feel more satisfied with himself, more self confident, more at ease with other people, and generally provides him a more desirable outlook on life.

His drinking has not led to any trouble with the police; nor has it affected his job or caused him other problems.

1. Would you say Mr. Keith is: (CHECK ONLY ONE)
   (1) ______ an alcoholic.
   (2) ______ a problem drinker.
   (3) ______ a heavy drinker.
   (4) ______ a social drinker.

2. Should Mr. Keith seek help for his drinking? ____ Yes ____ No

3. Should Mr. Keith be pressured to seek help? ____ Yes ____ No

4. If he refuses to do anything, should he be committed for help? ____ Yes ____ No

Mr. Irwin often has a drink or two at lunch, two or three more in the afternoon, and a few more in the evening. He sometimes becomes unsteady on his feet, but rarely staggers or has slurred speech. He hardly ever misses meals because of drinking and can always recall the events of the preceding evening.

Although he enjoys drinking, drinking has no great effect upon how he feels about himself, or how he feels in the company of others, or his general outlook on life.

His drinking has not led to any trouble with the police; nor has it affected his job or caused him other problems.

1. Would you say Mr. Irwin is: (CHECK ONLY ONE)
   (1)_____an alcoholic.
   (2)_____a problem drinker.
   (3)_____a heavy drinker.
   (4)_____a social drinker.

2. Should Mr. Irwin seek help for his drinking? ____Yes ____No

3. Should Mr. Irwin be pressured to seek help? ____Yes ____No

4. If he refuses to do anything, should he be committed for help? ____Yes ____No

* * * * *

Mr. Daniels has a drink or two about three or four times each week. He becomes intoxicated about once every two or three weeks, sometimes to the point of staggering and slurred speech. He always sobers up the next day. His drinking never interferes with regular meals. He can always recall what happened during an evening of drinking.

He enjoys drinking and finds that it makes him feel more satisfied with himself, more self confident, more at ease with other people, and generally provides him a more desirable outlook on life.

Within the past year he has been picked up by the police a couple of times, once for drunken driving and once for public intoxication. He recently changed jobs and has had other difficulties associated with drinking.

1. Would you say Mr. Daniels is: (CHECK ONLY ONE)
   (1)_____an alcoholic.
   (2)_____a problem drinker.
   (3)_____a heavy drinker
   (4)_____a social drinker

2. Should Mr. Daniels seek help for his drinking? ____Yes ____No

3. Should Mr. Daniels be pressured to seek help? ____Yes ____No

4. If he refuses to do anything, should he be committed for help? ____Yes ____No

Mr. Grant becomes intoxicated (staggers, slurred speech, etc.) once or twice a week. Before going to a party he takes a few quick ones to make sure he has enough. When drinking he often fails to eat. Sometimes he is unable to recall events of the preceding evening.

He enjoys drinking and finds that it makes him feel more satisfied with himself, more self confident, more at ease with other people, and generally provides him a more desirable outlook on life.

His drinking has not led to any trouble with the police; nor has it affected his job or caused him other problems.

1. Would you say Mr. Grant is: (CHECK ONLY ONE)
   (1)_____an alcoholic.
   (2)_____a problem drinker.
   (3)_____a heavy drinker.
   (4)_____a social drinker.

2. Should Mr. Grant seek help for his drinking? ____Yes ____No

3. Should Mr. Grant be pressured to seek help? ____Yes ____No

4. If he refuses to do anything, should he be committed for help? ____Yes ____No

* * * * *

Mr. Baker has a drink or two about three or four times each week. He becomes intoxicated about once every two or three weeks, sometimes to the point of staggering and slurred speech. He always sobers up the next day. His drinking never interferes with regular meals. He can always recall what happened during an evening of drinking.

Although he enjoys drinking, drinking has no great effect upon how he feels about himself, or how he feels in the company of others, or his general outlook on life.

Within the past year he has been picked up by the police a couple of times, once for drunken driving and once for public intoxication. He recently changed jobs and has had other difficulties associated with drinking.

1. Would you say Mr. Baker is: (CHECK ONLY ONE)
   (1)_____an alcoholic.
   (2)_____a problem drinker.
   (3)_____a heavy drinker.
   (4)_____a social drinker.

2. Should Mr. Baker seek help for his drinking? ____Yes ____No

3. Should Mr. Baker be pressured to seek help? ____Yes ____No

4.. If he refuses to do anything, should he be committed for help? ____Yes ____No

Mr. Johnson often has a drink or two at lunch, two or three more in the afternoon, and a few more in the evening. He sometimes becomes unsteady on his feet, but rarely staggers or has slurred speech. He hardly ever misses meals because of drinking and can always recall the events of the preceding evening.

Although he enjoys drinking, drinking has no great effect upon how he feels about himself, or how he feels in the company of others, or his general outlook on life.

Within the past year he has been picked up by the police a couple of times, once for drunken driving and once for public intoxication. He recently changed jobs and has had other difficulties associated with drinking.

1. Would you say Mr. Johnson is: (CHECK ONLY ONE)
   (1)_____an alcoholic.
   (2)_____a problem drinker.
   (3)_____a heavy drinker.
   (4)_____a social drinker.

2. Should Mr. Johnson seek help for his drinking? ____Yes ____No

3. Should Mr. Johnson be pressured to seek help? ____Yes ____No

4. If he refuses to do anything, should he be committed for help? ____Yes ____No

* * * * *

Mr. Hart becomes intoxicated (staggers, slurred speech, etc.) once or twice a week. Before going to a party he takes a few quick ones to make sure he has enough. When drinking he often fails to eat. Sometimes he is unable to recall events of the preceding evening.

He enjoys drinking and finds that it makes him feel more satisfied with himself, more self confident, more at ease with other people, and generally provides him a more desirable outlook on life.

Within the past year he has been picked up by the police a couple of times, once for drunken driving and once for public intoxication. He recently changed jobs and has had other difficulties associated with drinking.

1. Would you say Mr. Hart is: (CHECK ONLY ONE)
   (1)_____an alcoholic.
   (2)_____a problem drinker.
   (3)_____a heavy drinker.
   (4)_____a social drinker.

2. Should Mr. Hart seek help for his drinking? ____Yes ____No

3. Should Mr. Hart be pressured to seek help? ____Yes ____No

4. If he refuses to do anything, should he be committed for help? ____Yes ____No

Mr. Carlson has a drink or two about three or four times each week. He becomes intoxicated about once every two or three weeks, sometimes to the point of staggering and slurred speech. He always sobers up the next day. His drinking never interferes with regular meals. He can always recall what happened during an evening of drinking.

He enjoys drinking and finds that it makes him feel more satisfied with himself, more self confident, more at ease with other people, and generally provides him a more desirable outlook on life.

His drinking has not led to any trouble with the police; nor has it affected his job or caused him other problems.

1. Would you say Mr. Carlson is: (CHECK ONLY ONE)
(1)_____an alcoholic.
(2)_____a problem drinker.
(3)_____a heavy drinker.
(4)_____a social drinker.

2. Should Mr. Carlson seek help for his drinking? ____Yes ____No

3. Should Mr. Carlson be pressured to seek help? ____Yes ____No

4. If he refuses to do anything, should he be committed for help? ____Yes ____No

* * * * *

Mr. Evans becomes intoxicated (staggers, slurred speech, etc.) once or twice a week. Before going to a party he takes a few quick ones to make sure he has enough. When drinking he often fails to eat. Sometimes he is unable to recall events of the preceding evening.

Although he enjoys drinking, drinking has no great effect upon how he feels about himself, or how he feels in the company of others, or his general outlook on life.

His drinking has not led to any trouble with the police; nor has it affected his job or caused him other problems.

1. Would you say Mr. Evans is: (CHECK ONLY ONE)
(1)_____an alcoholic.
(2)_____a problem drinker.
(3)_____a heavy drinker.
(4)_____a social drinker.

2. Should Mr. Evans seek help for his drinking? ____Yes ____No

3. Should Mr. Evans be pressured to seek help? ____Yes ____No

4. If he refuses to do anything, should he be committed for help? ____Yes ____No

As you went through these brief case histories did you feel the need for some other kind of information to help you classify the case?

___Yes ___No

If "Yes," what?

(1)____

(2)____

(3)____

(4)____

(5)____

INSTRUCTIONS FOR SCORING

HYPOTHETICAL CASE HISTORIES

	Hart	Fry	Lane	Johnson	Daniels	Baker	Grant	Evans	Keith	Irwin	Carlson	Albert
Troubles	+	+	+	+	+	+	-	-	-	-	-	-
Preoccup.....	+	+	-	-	-	-	+	+	-	-	-	-
Pers. efc....	+	-	+	-	+	-	+	-	+	-	+	-
Q - F........	A	A	C	C	B	B	A	A	C	C	B	B

* TROUBLES DUE TO DRINKING is indicated by the occurrence of negative consequences due to drinking, i.e., arrests, health or family problems, employment difficulties, etc.

* PREOCCUPATION WITH ALCOHOL is indicated by a loss of control over drinking behavior, i.e., memory lapse, sneaking drinks when no one is looking, staying intoxicated for several days, neglecting regular meals while drinking, gulping drinks with little attention to the type of beverage, etc.

* PERSONAL EFFECTS OF ALCOHOL are the perceived effects of alcohol as felt by the drinker, i.e., alcohol improves social gatherings, gives me pleasure, helps me overcome shyness, helps me feel more satisfied with myself, helps me get along better with other people, etc.

* QUANTITY-FREQUENCY is a classification of drinking patterns by how much and how often alcohol is consumed.

"A" denotes the most frequent drinking - once or twice a week as in the case of Mr. Hart.

"B" denotes frequent drinking - "a drink, or two, three or four times a week," but less intoxication - "about once every two or three weeks" as in the mildest case.

"C" denotes continuous drinking - "a drink or two at lunch, two or three more in the afternoon, and a few more in the evening. He sometimes becomes unsteady on his feet but rarely staggers or has slurred speech."

* Indicators which mark an alcoholic as identified by Mulford in the Iowa Alcoholic Stages Index. (See additional information page 189.)

FUTURE DRUG USAGE QUESTIONNAIRE

TYPE OF MEASURE: Affective

OUTCOME ASSESSED: Intention to Refrain from Using Alcoholic Beverages and/or Drugs

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

The Future Drug Usage Questionnaire is designed to measure whether or not individuals intend to use drugs or alcohol in the future. Respondents are presented with 13 drug categories including alcohol, caffeine, glue, and nicotine, as well as commonly used illicit drugs, and asked to indicate how likely it is that they will use each drug this year and how likely it is they will ever use each drug. Response options are (1) Definitely Will, (2) Probably Will, (3) Don't Know, (4) Probably Will Not, and (5) Definitely Will Not.

This measure is one of the methods Jackson used to identify drug usage frequency and severity. Other methods asked about the subjects' current drug usage, (see Current Drug Usage Questionnaire, Jackson, page 166) as well as their friends' current and expected drug usage.

TECHNICAL INFORMATION:

Internal consistency estimates for subgroups of items within this measure, based on responses of 45 subjects, were generally in the .85 to .95 range. An exception was noted in items concerning the use of caffeine, with the internal consistency estimate dropping to .26.

AUTHOR: Javon Jackson
Palo Alto, California

ADDITIONAL INFORMATION:

Jackson, J. An evaluation of the students, teachers, and residents involved in drug education (S.T.R.I.D.E.) program. Unpublished doctoral dissertation, Michigan State University, 1975.

Please indicate how likely it is that you will use the following drugs in the next year.

	1	2	3	4	5
DRUGS	DEFINITELY WILL	PROBABLY WILL	DON'T KNOW	PROBABLY WILL NOT	DEFINITELY WILL NOT
GLUE					
AMPHETAMINES diet pills, speed, (uppers)					
ALCOHOL					
NICOTINE cigarettes, cigars, pipes					
BARBITURATES HYPNOTICS (Downers except Methaqualones)					
METHAQUALONES					
TRANQUILIZERS					
OPIATES heroin, morphine					
COCAINE					
CAFFEINE coffee, tea					
HALLUCINOGENS (LSD, STP, PCP) mescaline					
MARIJUANA					

Future Drug Usage Questionnaire
Page 2

Please indicate how likely it is that you will ever use the following drugs.

	1	2	3	4	5
DRUGS	DEFINITELY WILL	PROBABLY WILL	DON'T KNOW	PROBABLY WILL NOT	DEFINITELY WILL NOT
GLUE					
AMPHETAMINES diet pills, speed, (uppers)					
ALCOHOL					
NICOTINE cigarettes, cigars, pipes					
BARBITURATES HYPNOTICS (Downers except Methaqualones)					
METHAQUALONES					
TRANQUILIZERS					
OPIATES heroin, morphine					
COCAINE					
CAFFEINE coffee, tea					
HALLUCINOGENS (LSD, STP, PCP) mescaline					
MARIJUANA					

TENTATIVE DRUG USE SCALE

TYPE OF MEASURE: Affective

OUTCOME ASSESSED: Intention to Refrain from Using Alcoholic Beverages and/or Drugs

TARGET POPULATION: Adults or Adolescents

GENERAL DESCRIPTION:

The *Tentative Drug Use Scale* (*TDUS*) is designed to assess an individual's willingness to use or abstain from using certain drugs. Individuals are presented with the names of nine drugs and asked to circle a yes or no response to the question, "If given the opportunity, would you try:". The author suggests that the measure be used as an immediate posttest to drug abuse prevention projects or as a survey research instrument to determine the extent of a drug problem in a certain locale. Items may be added, deleted, or grouped to suit the evaluator's intentions. A total drug use score is obtained by summing the number of "yes" responses. Items such as bindro (a bogus drug) or curare (a little known drug causing paralysis) are included to help identify respondents who falsely maximize their interest in drugs.

TECHNICAL INFORMATION:

A stability reliability coefficient of .96 was reported for 22 college upperclassmen based on a one week test-retest interval. In a concurrent validity study correlating scores on the *TDUS* and the *Personal Drug Use Scale* of the *Pennsylvania State University Drug Evaluation Scales*, the following correlations were obtained: Marijuana .89, Hashish .96, Hallucinogens .63, Stimulants and Depressants .85, Cocaine .48, and Heroin -.03. The authors believe that the low correlation for reported use of heroin does, in fact, support the construct validity of the *TDUS*.

AUTHORS:
John J. Horan
Pennsylvania State University

John M. Williams
Treatment and Rehabilitation Center,
Lackawana County, Pennsylvania

ADDITIONAL INFORMATION:

Horan, J.J., & Williams, J.M. The tentative drug use scale: a quick and relatively problem free outcome measure for drug abuse prevention projects. *Journal of Drug Education*, 1975, *5* (4), 381-384.

Tentative Drug Use Scale

Please draw a circle around your answer.

If given the opportunity, would you try:

Marijuana (Pot)	Yes	No
Hashish (Hash)	Yes	No
Bindro	Yes	No
Hallucinogens (LSD, Peyote)	Yes	No
Stimulants (Uppers)	Yes	No
Depressants (Downers)	Yes	No
Cocaine	Yes	No
Curare (Coolies)	Yes	No
Heroin (Smack)	Yes	No

TEST SPECIFICATIONS
DRINKING EFFECTS

GENERAL DESCRIPTION

Individuals are asked to indicate how often during the preceding month they have experienced a variety of circumstances indicative of irresponsible use of alcohol. This information can be used as a measure of the extent to which respondents have avoided consumption patterns that could inconvenience or endanger themselves or others.

SAMPLE ITEM

Answer the following questions by indicating how often, if ever, an event has happened during the past MONTH. Circle the appropriate letter to the left of each question.

A = Never
B = Once
C = More than once

Do not put your name on this survey. Your responses are strictly confidential.

Never	Once	More than Once		
A	B	C	1.	Has your speech become fuzzy or slurred while drinking?

STIMULUS ATTRIBUTES

1. An item will consist of a one-sentence question asking respondents if they have experienced a given circumstance during or because of their drinking. Circumstances will be indicative of irresponsible consumption patterns of alcohol; that is, patterns of usage that inconvenience or endanger the individual or others.

2. Each question will be 15 words or less in length. The words will not exceed the eighth grade level of the IOX Basic Skills Word List.

CHAPTER SEVEN

TEST SPECIFICATIONS

This chapter contains the test specifications for all the newly-developed measures presented in Chapter Five. The specifications are arranged in the same order as that chapter's measures, with behavioral measures first, followed by knowledge, skill, and affective instruments.

Test specifications describe in detail both what an instrument is to measure and the manner in which the assessment is to be accomplished. Each set of test specifications begins with a General Description, which presents a brief overview of the scope and nature of the measure to be specified. A Sample Item follows, showing a typical item contained in the measure and the directions to respondents that accompany the instrument. The Stimulus Attributes section lists the rules that explain how the items for the measure are to be constructed. The Response Attributes section lists the rules that explain how the response options for the measure are to be constructed.

Many of the sets of specifications have one or more additional sections. A Technical Terms Supplement lists content-specific words which exceed the normal readability restrictions of a measure but which are used because of their importance and relevance. A Specifications Supplement, contained in all knowledge test specifications, presents an exhaustive listing of the content eligible for testing. Knowledge test specifications also contain a Bibliography which cites the references consulted in developing the content listing. Behavioral and affective test specifications include a Scoring and Interpretation section which explains the rationale and procedures to be used in evaluating the measure's data. Some affective test specifications also include a section entitled Measure Format which presents an item-by-item overview of the measure itself, highlighting the different variables represented by each item.

RESPONSE ATTRIBUTES

1. The following three response options will be available for each item:

   A = Never
   B = Once
   C = More than once

2. Respondents are to circle the letter of the response option to the left of the question to indicate the frequency with which each of the given circumstances has occurred during the preceding month.

INTERPRETATION AND SCORING

1. The responses to the questionnaire should permit program personnel to determine the extent to which individuals are consuming alcohol responsibly.

2. Point values are assigned to items according to the frequency of occurrence of the event described. The following values can be used: A = 2 points, B = 1 point, C = 0 points.

3. High scores indicate little, if any, evidence of the irresponsible use of alcohol as reported on this survey.

4. If desired, program personnel can change the survey's specified time period of a month in order to focus data collection efforts on a shorter period (e.g., a week) for more detailed monitoring, or a longer period (e.g., 6 months) for monitoring more general trends in behavior. Such changes can be made without altering the basic content or format of the instrument.

TEST SPECIFICATIONS
SUBSTANCE SURVEY

GENERAL DESCRIPTION

Individuals are asked about their current use of alcoholic beverages and specific drugs to determine how often they currently consume these substances. This information can be used as a measure of how effectively a program has aided participants in abstaining from the use of these substances.

SAMPLE ITEM

Various substances are listed below. For each one, place a check (√) in the appropriate column to show how often during the past month you have used the substance. Do not count any times you have used a substance with a doctor's prescription. If you do not know if you have used a particular substance, place a check in the NOT SURE column.

Please do not put your name on this survey. Your responses are strictly confidential.

HOW OFTEN DURING THE PAST MONTH HAVE YOU USED THE SUBSTANCE?

SUBSTANCE	NOT AT ALL	ONCE A MONTH	2-3 TIMES A MONTH	ONCE A WEEK	2-3 TIMES A WEEK	4-6 TIMES A WEEK	DAILY	NOT SURE
BEER or WINE								

STIMULUS ATTRIBUTES

1. An item will name a specific substance or a category of substances. Substances will be identified by their generic name. Where necessary, common exemplars or slang names will be presented in parentheses below the generic name, to help identify a substance.

2. The questionnaire will elicit information about each of the following substances: beer or wine, hard liquor, marijuana, psychedelics, amphetamines, barbiturates, inhalants, cocaine, and opiates.

RESPONSE ATTRIBUTES

1. Eight response columns will be provided. Seven of the columns will specify time intervals which are likely to be meaningful to respondents. The eighth column will state "not sure." Time intervals will be arranged from left to right in order of increasing frequency.

2. The response columns will be arrayed and labeled as follows:

NOT AT ALL	ONCE A MONTH	2-3 TIMES A MONTH	ONCE A WEEK	2-3 TIMES A WEEK	4-6 TIMES A WEEK	DAILY	NOT SURE

3. For each substance, respondents will place a check in the appropriate column to indicate how often they have used that substance during the preceding month.

INTERPRETATION

1. The responses to the questionnaire should permit program personnel to assess the current level of drinking and drug use of respondents in order to determine whether respondents are abstaining from or have stopped consuming these substances.

2. In addition to information about abstention or cessation, program personnel will be able to obtain information on the frequency of consumption of specified substances.

3. In addition to information about the substances listed, program personnel can include a hypothetical substance (e.g., "corazine") to reveal exaggeration in responses. Questionnaires from participants who indicate using the hypothetical substance can be discarded. Furthermore, an "other" category can be included or the list of substances can be modified if program personnel wish to assess the use of additional substances.

4. If desired, program personnel can change the survey's specified time period of a month in order to focus data collection efforts on a shorter period (e.g., a week) for more detailed monitoring, or a longer period (e.g., 6 months) for monitoring more general trends in behavior. Such changes would require modifying the response options to correspond to appropriate intervals within the selected time period.

TEST SPECIFICATIONS

DO YOU USE THESE?

GENERAL DESCRIPTION

Children are asked about their current use of alcoholic beverages and specific drugs to determine how often they currently consume these substances. This information can be used as a measure of how effectively a program has aided participants in abstaining from these substances.

SAMPLE ITEM

Have you used any of the things listed below? Use a check to show how often, if at all, you have used each one during the past MONTH. If you do not know, put a check in the NOT SURE space.

Do not put your name on this paper. Your answers will be a secret.

	NOT AT ALL	ONCE A MONTH	2-3 TIMES A MONTH	ONCE A WEEK OR MORE	NOT SURE
BEER					

STIMULUS ATTRIBUTES

1. An item will name a specific substance or category of substance. Where appropriate, common exemplars or slang names will be used to identify specific substances.

2. The questionnaire will elicit information about each of the following substances: beer, wine, hard liquor, marijuana, hashish, LSD, PCP, speed (amphetamines), downers (barbiturates), glue, cocaine, and heroin.

RESPONSE ATTRIBUTES

1. Five response columns will be provided. Four of the columns will specify time intervals which are likely to be meaningful to respondents. The fifth column will state, "not sure." Time intervals will be arrayed from left to right in order of increasing frequency.

2. The response columns will be arrayed and labeled as follows:

NOT AT ALL	ONCE A MONTH	2-3 TIMES A MONTH	ONCE A WEEK OR MORE	NOT SURE

3. Respondents will place a check in the appropriate column to indicate how often they have used that substance during the preceding month.

INTERPRETATION

1. The responses to the questionnaire should permit program personnel to assess the current level of drinking and drug use of respondents in order to determine whether respondents are abstaining from the use of these substances.

2. In addition to information about abstention, program personnel will be able to obtain information on the frequency of consumption of specified substances.

3. In addition to information about the substances listed, program personnel can include a hypothetical substance (e.g., "corazine") to reveal exaggerations in responses. Questionnaires from participants who indicate using the hypothetical substance can be discarded. Furthermore, an "other" category can be included or the list of substances can be modified, if program personnel wish to assess the use of additional substances.

4. If desired, program personnel can change the survey's specified time period of a month in order to focus data collection efforts on a shorter period (e.g., a week), for more detailed monitoring, or a longer period (e.g., 6 months) for monitoring more general trends in behavior. Such changes would require modifying the response options to correspond to appropriate intervals within the selected time period.

TEST SPECIFICATIONS
CONSEQUENCES OF ALCOHOL USE

GENERAL DESCRIPTION

Individuals are presented with statements about physical, psychological, and social consequences of alcohol use. Individuals indicate whether each statement is true or false.

SAMPLE ITEM

> **This test consists of 20 statements about the effects of alcohol. Some of the statements are true and some are false. If you think a statement is true, put a check in the column labeled TRUE. If you think a statement is false, put a check in the column labeled FALSE.**

TRUE FALSE

____ ____ 1. Ethanol is a chemical that depresses the action of the central nervous system.

STIMULUS ATTRIBUTES

1. A test item will consist of a single-sentence statement that the individual is to judge as true or false. This statement will contain information related to a potential physical, psychological, or social consequence of alcohol use.

2. All test items will be derived from the specifications supplement Consequences of Alcohol Use. This supplement presents statements about alcohol use which are based upon empirical evidence or expert consensus. The statements are organized into sections, with each section containing information about one type of consequence of alcohol use.

3. Each statement on the supplement consists of one main idea related to the consequences of alcohol use. A statement either (a) describes the nature of a consequence or its effects on a particular subject, or (b) presents a correlational or causal relationship between two subjects.

4. A test item will be based on a single statement selected from the supplement. If the supplement statement contains multiple parallel elements, only one of the elements will be used in the test item.

   Example of a supplement statement with multiple parallel elements

   Heavy alcohol use is related to an increased risk of cancer of the mouth, pharynx, larynx, and esophagus.

5. A test item will present a supplement statement in either accurate or inaccurate form. An accurate test item can be created in one of the following two ways:

   a. Direct restatement: Reiterating a statement exactly as it appears on the supplement.

   b. Paraphrase: Rephrasing a supplement statement to communicate the same message in different words. This rephrasing may include substituting synonyms for words in the statement and/or reordering words within the statement. The quantitative portion of a supplement statement may not be paraphrased.

      Example of a test item created by paraphrase

      Supplement statement: Regular heavy use of alcohol produces a general loss of mental ability.

      Test Item: A general loss of mental ability results from prolonged heavy use of alcohol.

6. An inaccurate test item will be based on a supplement statement or a paraphrase of that statement. An inaccurate item can be created in one of the following two ways:

   a. Negation: Rewording a supplement statement to have the opposite meaning. If the statement is worded positively, negation is accomplished by adding a negative word or phrase to the statement. If the statement is worded negatively, negation is accomplished by taking out a negative word or phrase.

      Example of a test item created by negation

      Supplement statement: A blood alcohol level of 0.02% usually does not cause intoxication.

Test item: A blood alcohol level of 0.02% usually causes intoxication.

b. Mutual exclusivity: Transforming a supplement statement to communicate a message that is mutually exclusive with the original message. This transformation can be accomplished by either (1) changing a single verb, adjective, or adverb in the original statement to a word or phrase with a contradictory meaning, (2) changing a comparative statement to either reverse the direction of the comparison made or make both terms being compared equal, or (3) changing a quantitative value to one that is different than the one given. A quantitative change must result in a new value that makes the original statement false, rather than a value that allows the statement to remain true because it represents a subset of the original statement. A quantitative change must be expressed in the same terms as the original value.

Examples of test items created by transformation to a mutually exclusive statement

Supplement statement: Intoxication decreases the force of the pumping action of the heart.

Test item: Intoxication increases the force of the pumping action of the heart.

Supplement statement: Alcoholics who develop cancer are less likely than nonalcoholics to survive.

Test item: Alcoholics who develop cancer are more likely than nonalcoholics to survive.

Supplement statement: Alcohol usage contributes to slightly more than 50% of all traffic accidents each year.

Test item: Alcohol usage contributes to slightly more than 75% of all traffic accidents each year.

7. A test item will contain a maximum of 25 words. These words will be no higher than an eighth grade reading level on the IOX Basic Skills Word List. Technical terms not found on the word list may be used only if they are listed on the Technical Terms Supplement.

8. A test will contain an approximately equivalent number of accurate and inaccurate test items. These items will be selected according to the following procedures:

   a. One item will be randomly selected from each section of the supplement.

   b. The rest of the items will be randomly selected from the supplement as a whole.

   c. All of the items will be reviewed by content experts and modified as needed based upon this review.

9. All of the procedures for creating accurate and inaccurate test items will be used as equally as possible, with the exception of negation of a positively-stated supplement statement. This type of change will be used only when no other transformation is possible, as it results in a test item which requires the respondent to recognize that a negatively-stated idea is not accurate, in effect creating a double negative.

RESPONSE ATTRIBUTES

1. Two response columns will be provided. One column will be labeled "TRUE" and the other will be labeled "FALSE."

2. The correct answer to a question will be "TRUE" if the statement is accurate, or "FALSE" if the statement is inaccurate.

SPECIFICATIONS SUPPLEMENT
CONSEQUENCES OF ALCOHOL USE

PHYSICAL CONSEQUENCES

Nature of Alcohol

1. Alcoholic beverages contain ethanol.

2. Ethanol is a chemical that depresses the action of the central nervous system.

3. Ethanol acts as a mind altering drug.

4. Alcohol is high in calories.

5. Alcohol contains only small amounts of vitamins, minerals, and proteins.

6. When alcohol is present, the body uses it for fuel and stores other food as fat.

7. People who drink a great deal and also eat enough food to meet their daily nutritional requirements are often overweight.

8. Alcoholics often have a nutritionally inadequate diet because alcohol takes the place of the other food that they need to be healthy.

Alcohol and the Cardiovascular System

9. After two to five drinks, a healthy person's heart rate and blood pressure will both increase slightly.

10. Intoxication decreases the force of the pumping action of the heart.

11. Alcoholics with no previous history of heart disease often develop abnormally functioning heart muscles.

12. Regular heavy alcohol use may lead to heart muscle failure.

Alcohol and the Nervous System

13. A person's control over social behavior, motor coordination, speech, and vision decreases in relation to the amount of alcohol consumed.

14. Regular heavy use of alcohol produces a general loss of mental ability.

15. One of the major consequences of alcoholism is the loss of brain cells.

16. Approximately 10% of all alcoholics suffer irreversible brain damage.

17. Alcohol is less likely to affect the nervous system of an individual who is in good muscular condition.

Alcohol and the Gastrointestinal System

18. Alcohol is absorbed into a person's blood stream as soon as it is consumed.

19. Intestinal problems caused by alcohol consumption contribute to nutritional deficiencies.

20. Alcohol can cause inflammations and bleeding sores in the stomach.

21. Any food, and especially milk, fats, and meat, will slightly slow down the absorption of alcohol into the blood stream.

Alcohol and Cancer

22. Heavy alcohol use is related to an increased risk of cancer of the mouth, pharynx, larynx, and esophagus.

23. Alcoholics who develop cancer are less likely than nonalcoholics to survive.

24. Alcoholics who have developed cancer are more likely than nonalcoholics to develop another cancer.

Alcohol and Liver Disease

25. Approximately 75% of all regular heavy drinkers suffer from liver problems.

26. Approximately 8% of all regular heavy drinkers develop cirrhosis of the liver.

Alcohol, Hypertension, and Stroke

27. Regular heavy drinking is associated with a substantially higher rate of hypertension.

28. The use of alcohol increases a person's chances of having a stroke.

Alcohol and Male Hormone Levels

29. Regular heavy alcohol use permanently lowers a man's serum testosterone level.

30. Many male alcoholics experience loss of sexual function, loss of libido, breast enlargement, loss of facial hair, and testicular atrophy as a result of lowered testosterone levels.

Interactive Effects of Alcohol

31. How alcohol affects a person's mental and physical performance depends upon the amount of alcohol consumed and the person's age.

32. The combined effects of alcohol and tobacco increase a person's chances of developing some types of cancer.

33. A woman who drinks during pregnancy increases her risk of having a baby that suffers from birth defects.

34. A woman who drinks heavily during pregnancy is more likely to have a child with limited growth potential, small head size, facial deformation, abnormal joints, cardiac irregularities, mental damage, and/or psychomotor handicaps.

Alcohol Tolerance

35. Alcohol tolerance refers to the amount of alcohol a person must drink before feeling its effects.

36. With regular drinking, an individual's alcohol tolerance increases and can develop into a physical and psychological dependence.

37. Increased alcohol tolerance means that a person must drink larger amounts of alcohol in order to feel the same effects previously felt with less alcohol.

Rate of Intoxication

38. The presence of food in the stomach prior to drinking slows the rate of intoxication.

39. The higher the alcohol content of a beverage, the faster the rate of intoxication within a given time period.

40. A person's degree of intoxication depends on the quantity of alcohol consumed within a given time period.

Effects of Blood Alcohol Concentration Levels

41. Blood alcohol levels are usually expressed in milligrams of alcohol per 100 milliliters of blood.

42. A blood alcohol level of 0.02% usually does not indicate intoxication.

43. A blood alcohol level of 0.05 to 0.09% will cause a person to feel happy and experience some problems with balance, speech, vision, and motor coordination.

44. At a blood alcohol level of 0.15%, most people are unmistakably intoxicated and have major problems controlling their mind and body.

45. At a blood alcohol level of 0.20 to 0.30%, any person will be severely intoxicated and have little control over mind and body.

46. People usually pass out at a blood alcohol level of 0.40%.

47. A blood alcohol level above 0.50% is usually fatal.

Sobering Up Process

48. Sobering up occurs when alcohol is broken down chemically by the liver and then metabolized by the body.

49. As a result of sobering up, a person regains control of the mental and physical functions depressed by alcohol.

50. Eating foods that are high in fats or carbohydrates does not affect the body's rate of metabolism of alcohol.

51. Caffeine does not affect the body's rate of metabolism of alcohol.

52. Caffeine may help a person temporarily regain control of certain mental and physical functions by partially stimulating some of the cells depressed by alcohol.

PSYCHOLOGICAL CONSEQUENCES

53. Temporary memory losses may become a source of embarrassment for heavy drinkers.

54. Heavy drinkers often spend much of their time thinking about alcohol.

55. Heavy drinkers often feel guilty, angry, and defensive about their drinking behavior.

56. Heavy drinkers often do not believe that they have a drinking problem.

SOCIAL CONSEQUENCES

57. Approximately 8 million Americans, 9% of the adult population, are either alcoholics or problem drinkers.

58. The drinking habits of alcoholics harm themselves, their families, employers, law enforcement agencies, and society in general.

59. The national alcoholism problem costs the nation approximately 50 billion dollars annually.

60. The chances of having a traffic accident increase as a driver's blood alcohol content increases.

61. Alcohol usage contributes to slightly more than 50% of all traffic accidents each year.

TECHNICAL TERMS SUPPLEMENT
CONSEQUENCES OF ALCOHOL USE

atrophy
carbohydrates
cirrhosis
defensive
esophagus
ethanol
intestine
larynx
libido
metabolism
milligram
milliliter
pharynx
pregnancy
protein
psychological
psychomotor coordination
serum testosterone
stimulant
testicular atrophy

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TEST SPECIFICATIONS
CONSEQUENCES OF DRUG USE

GENERAL DESCRIPTION

Individuals are presented with statements about physical and psychological consequences related to the use of marijuana, hallucinogens, depressants, stimulants and narcotics. Individuals indicate whether each statement is true or false.

SAMPLE ITEM

This test consists of 30 statements about the effects of drug use. Some of the statements are true and some are false. If you think a statement is true, put a check in the column labeled TRUE. If you think a statement is false, put a check in the column labeled FALSE.

TRUE FALSE

____ ____ 1. Moderate marijuana use does not cause permanent physical damage.

STIMULUS ATTRIBUTES

1. A test item will consist of a single-sentence statement that the individual is to judge as true or false. This statement will contain information related to a potential physical or psychological consequence related to drug use.

2. All test items will be derived from the specifications supplement Consequences of Drug Use. This supplement presents statements about drug use which are based upon empirical evidence or expert consensus. The statements are organized into sections, with each section containing information about one category of drug.

3. Each statement on the supplement consists of one main idea related to the consequences of drug use. A statement either (a) describes the nature or effects of a particular subject, or (b) presents a correlational or causal relationship between two subjects.

4. A test item will be based on a single statement selected from the supplement. If the supplement statement contains multiple parallel elements, only one of the elements will be used in the test item.

Example of a supplement statement with multiple parallel elements

Cocaine use increases pulse and breathing rates, raises body temperature and blood pressure, causes a loss of appetite, constricts blood vessels, and enlarges the pupils.

5. A test item will present a supplement statement in either accurate or inaccurate form. An accurate test item can be created in one of the following two ways:

   a. Direct restatement: Reiterating a statement exactly as it appears on the supplement.

   b. Paraphrase: Rephrasing a supplement statement to communicate the same message in different words. This rephrasing may include substituting synonyms for words in the statement and/or reordering words within the statement.

   Example of a test item created by paraphrase

   Supplement statement: Sudden withdrawal from heavy amphetamine use can cause severe depression.

   Test Item: Severe depression can result from a sudden withdrawal from heavy amphetamine use.

6. An inaccurate test item will be based on a supplement statement or a paraphrase of that statement. An inaccurate item can be created in one of the following three ways:

   a. Negation: Rewording a supplement statement to have the opposite meaning. If the statement is worded positively, negation is accomplished by adding a negative word or phrase to the statement. If the statement is worded negatively, negation is accomplished by taking out a negative word or phrase.

Example of a test item created by negation

Supplement statement: Hallucinogens are not physically addicting.

Test item: Hallucinogens are physically addicting.

b. Mutual exclusivity: Transforming a supplement statement to communicate a message that is mutually exclusive with the original message. This transformation can be accomplished by either (1) changing a single verb, adjective, or adverb in the original statement to a word or phrase with a contradictory meaning, (2) changing a comparative statement to either reverse the direction of the comparison made or make both terms being compared equal, or (3) changing a quantitative value to one that is different than the one given. A quantitative change must result in a new value that makes the original statement false, rather than a value that allows the statement to remain true because it represents a subset of the original statement. A quantitative change must be expressed in the same terms as the original value.

Examples of test items created by transformation to a mutually exclusive statement

Supplement statement: Hallucinogens cause temporary changes in sensations.

Test item: Hallucinogens cause permanent changes in sensations.

Supplement statement: The effects of hashish are similar to but more powerful than the effects of marijuana.

Test item: The effects of hashish are similar to, and equally as powerful as, the effects of marijuana.

Supplement statement: Barbiturate drugs are effective for different periods of time, ranging from 2-12 hours.

Test item: Barbiturate drugs are effective for different periods of time, ranging from 15-24 hours.

7. A test item will contain a maximum of 25 words. These words will be no higher than an eighth grade reading level, as judged by the IOX Basic Skills Word List. Technical terms not found on the word list may be used only if they are listed on the Technical Terms Supplement.

8. A test will contain an approximately equivalent number of accurate and inaccurate test items. These items will proportionately represent each of the five drug categories. Items will be randomly selected from the supplement statements within each category. All of the items will be reviewed by content experts and modified as needed based upon this review.

9. All of the procedures for creating the two types of items will be used as equally as possible, with the exception of negation of a positively-stated supplement statement. This type of change will be used only when no other transformation is possible, as it results in a test item which requires the respondent to recognize that a negatively-stated idea is not accurate, in effect creating a double negative.

RESPONSE ATTRIBUTES

1. Two response columns will be presented. One column will be labeled "TRUE" and the other will be labeled "FALSE."

2. The correct answer to a question will be "TRUE" if the statement is accurate, or "FALSE" if the statement is inaccurate.

SPECIFICATIONS SUPPLEMENT
CONSEQUENCES OF DRUG USE

MARIJUANA

Nature of Marijuana

1. Marijuana and hashish are made from the Indian hemp plant, Cannabis Satvia.

2. The main chemical in marijuana and hashish that causes intoxication is tetrahydrocannabinol (THC).

3. The effects of hashish are similar to but more powerful than the effects of marijuana.

Physical Effects

4. The physical effects of marijuana use include rapid heart beat, lowered body temperature, and reddening of the eyes.

5. Frequent marijuana use may cause bronchitis, constant coughing, and lung problems.

6. There are more cancer-causing chemicals in marijuana smoke than in tobacco smoke.

7. A person's reaction time, control over hands and body, hearing, and ability to concentrate are all negatively affected by marijuana use.

8. A driver under the influence of marijuana makes driving errors due to decreased attention and decreased abilities to judge distance and to recover from the glare of car headlights.

9. Though marijuana's effects on growth are still unknown, some studies show changes in the sex hormones of users.

10. Moderate marijuana use does not cause permanent physical damage.

11. Most authorities agree that a marijuana user does not develop a physical dependence on the drug.

Psychological Effects

12. Regular heavy use of marijuana may result in a psychological dependence on the drug.

13. Small to moderate doses of marijuana may temporarily increase one's sense of well-being; change one's sense of touch, sight, smell, taste or sound; decrease memory; produce feelings of mental and/or physical laziness, giddiness, or anxiety; and alter one's sense of time.

14. A large dose of marijuana can cause the user to temporarily lose a sense of personal identity and experience hallucinations.

Degree of Intoxication

15. The effects of marijuana vary with the amount and strength of the dose used.

16. The social setting in which marijuana is used and a user's expectations will influence that user's reactions to the drug.

17. The effects of marijuana are stronger when it is smoked than when it is eaten.

Medicinal Uses

18. Marijuana is effective in treating glaucoma, asthma, and the nausea and vomiting that accompany some cancer treatments.

HALLUCINOGENS

Nature of Hallucinogens

19. Hallucinogens cause temporary changes in sensations.

20. Hallucinogens are not physically addicting.

21. Common types of hallucinogens include peyote, mescaline, psilocybin, LSD, STP, and PCP.

Physical Effects

22. Physical reactions to hallucinogens may include numbness, nausea, feeling cold, lack of appetite, shaking hands and feet, enlarged pupils, increased heart rate, increased body temperature, high blood pressure, and high blood sugar.

23. Experts do not know if LSD damages blood cells, chromosomes, or a developing fetus.

Psychological Effects

24. An individual using a hallucinogen may be confused about what is real, "see" sounds and "hear" colors, hallucinate, experience strong but opposite feelings at the same time, and experience an altered sense of time, space, and self.

25. The effects of hallucinogens can differ each time the drug is taken.

26. The effects of a hallucinogenic drug are strongly influenced by a user's thoughts, environment, and people who are with the user when the drug is taken.

Dangers of Use

27. Users of hallucinogens may panic or become terrified and harm themselves or others.

28. Hallucinogen users may relive experiences that happened under the influence of the drug.

29. People who sell drugs often misrepresent the hallucinogens sold.

30. People under the influence of a hallucinogen may harm themselves or others.

PCP

31. PCP is a powerful and dangerous drug.

32. PCP may cause the user to behave in violent and strange ways and may cause temporary mental disorder.

33. More PCP users die from accidents caused by their strange PCP-produced behavior than from PCP's direct effect on the body.

DEPRESSANT DRUGS

Nature of Depressant Drugs

34. Depressant drugs include barbiturates, non-barbiturate substitutes, and tranquilizers.

35. Depressant drugs relax the body's muscles, relieve feelings of anxiety and tension, and bring on sleep.

36. Regular use of a particular depressant drug creates a physical tolerance to that drug and to other depressant drugs.

37. Depressant drugs taken in higher than prescribed doses cause psychological and physical dependence.

38. Large doses of depressant drugs often produce unsound judgment, slurred speech, and a loss of motor coordination.

39. Untreated withdrawal from physical addiction to depressant drugs can cause convulsions and/or death.

Barbiturates

40. Barbiturates are frequently prescribed by doctors to bring on sleep and reduce tension.

41. Barbiturate drugs are effective for different periods of time, ranging from 2-12 hours.

42. Commonly used barbiturates include Seconal, Nembutal, Tuinal, Amytal, Butisol, Luminal, Veronal, Mebarol, and Gemonil.

43. Negative side effects such as delirium, nausea, nervousness, rash, and diarrhea can occur when a barbiturate user is psychologically upset or in extreme physical pain.

Non-Barbiturate Depressant Drugs

44. Commonly used non-barbiturate depressant drugs include Doriden, Quaalude, Parest, Optimil, Sonmafac, and Sopor.

45. Non-barbiturate depressant drugs can produce tolerance, and physical and pyschological dependence on the drugs.

Tranquilizers

46. Tranquilizers are divided into two groups, the major and the minor tranquilizers.

47. Major tranquilizers are used to treat mental and emotional disorders, alcoholism, and anxiety.

48. Commonly used major tranquilizers include Thorazine, Compazine, Stellazine, and Reserpine.

49. Minor tranquilizers are used to relieve anxiety, tension, and muscle spasms without changing the ability to think clearly.

50. Commonly used minor tranquilizers include Librium, Valium, Serax, Dalmane, and Tranxene.

51. Minor tranquilizers are the most prescribed drugs in the world.

52. Users of minor tranquilizers commonly abuse the drugs.

53. Large doses of minor tranquilizers taken over long periods will produce tolerance and physical and psychological dependence.

Dangers Associated with Depressant Drug Use

54. There is not much difference between therapeutic levels of barbiturates and the levels that produce serious overdose and death.

55. In the United States, barbiturates are the most common drugs used for suicide.

56. The effects of barbiturate drug poisoning occur slowly, increasing the chances of an accidental drug overdose.

57. Physical dependence on barbiturates is as severe as a user's dependence on heroin.

58. The size of a dose of depressant drugs that will be fatal is lowered considerably when the drug is taken with alcohol or other drugs.

59. Although depressant drugs are used to remedy sleeplessness, they do not bring on a "normal" sleep.

STIMULANT DRUGS

Nature of Stimulants

60. Stimulant drugs increase alertness, activity, and excitement by speeding up the body's processes.

61. The most common stimulants are amphetamines, cocaine, nicotine, and caffeine.

62. Many people use stimulant drugs to help control weight, increase physical performance, and increase mental performance and alertness.

Nicotine

63. The nicotine contained in tobacco can make a person feel better.

64. Some scientists believe that nicotine is addictive.

65. Nicotine increases the heart rate and blood pressure.

Caffeine

66. Caffeine is found in coffee, tea, and some soft drinks.

67. Caffeine is the most common everyday stimulant.

68. Caffeine can speed up the body's metabolism of food and provide temporary relief from physical tiredness.

69. Frequent side effects of too much caffeine are anxiety and the inability to concentrate.

Cocaine

70. Regular cocaine users do not develop either a physical tolerance or a physical dependence on the drug.

71. Regular cocaine users often develop a strong psychological dependence on the drug.

72. Cocaine use increases pulse and breathing rates, raises body temperature and blood pressure, causes a loss of appetite, constricts blood vessels, and enlarges the pupils.

73. Psychological effects experienced by cocaine users include feelings of happiness and excitement.

74. Smoking "freebase," the most dangerous form of cocaine, can cause anxiety, extreme excitement, and hallucinations.

Amphetamines

75. The most commonly used amphetamines are Benzedrine, Dexedrine, and Methedine.

76. Amphetamine use constricts blood vessels, increases heart rate, raises blood pressure, enlarges pupils, increases blood sugar, and depresses appetite.

77. Amphetamine users may experience slight heart problems, dry mouth, sweating, headache, and diarrhea as side effects of amphetamine drug use.

78. The psychological effects of amphetamines include feelings of alertness, happiness, and a sense of having increased mental and physical powers.

79. Amphetamines are prescribed for appetite control and narcolepsy and to counteract the effects of other drugs and alcohol.

Dangers of Amphetamine Use

80. People who use amphetamines for weight control often become psychologically dependent on the drug to make them feel better.

81. Because amphetamines mask feelings of tiredness, users may perform a task longer than is safe.

82. Amphetamines make the body work less efficiently by increasing heart rate and blood pressure beyond that which is needed to perform a particular task.

83. Although amphetamines help fight drowsiness, they are likely to lead to loss of accuracy, judgment, and problem solving ability.

84. Regular users of amphetamines are likely to feel extremely tired, angry, and hostile.

85. Sudden withdrawal from heavy amphetamine use can cause severe depression.

NARCOTIC DRUGS

Nature of Narcotic Drugs

86. Narcotic drugs include opium and drugs made from the opium poppy, such as heroin, morphine, and codeine.

87. Cocaine and marijuana are classified legally but not chemically as narcotic drugs.

88. Narcotic drugs depress the central nervous system.

89. Medically, narcotic drugs are used to relieve pain and to bring on sleep.

90. The physical effects of narcotics may include decreased breathing rate, reduced vision, constipation, nausea, and vomiting.

91. The psychological effects of narcotics may include a temporary sense of well-being and feelings of contentment and safety.

Heroin

92. Regular heroin use causes tolerance and psychological and physical dependence on the drug.

93. Most of the dangers of heroin use are caused not by the physical effects of the drug itself but by the uncertain dose levels, the use of dirty needles, and the mixing of heroin with more dangerous substance.

94. Since heroin addicts usually think only about getting and taking heroin, they often neglect themselves and suffer from poor nutrition, infections, and untreated diseases.

95. If a woman is addicted to heroin while pregnant, her baby will be born addicted and will have to be treated for withdrawal symptoms.

TECHNICAL TERMS SUPPLEMENT

CONSEQUENCES OF DRUG USE

ddict
mphetamine
mytal
nticonvulsant
sthma
arbiturate
enzedrine
ronchitis
utisol
affeine
ancer
annabis Satvia
hromosomes
ocaine
odeine
ompazine
onstipation
onvulsions
almane
elirium
exedrine
iarrhea
oriden
etus
reebase
emonil
glaucoma
hallucination
hallucinogens
hashish
hemp
heroin
hormones
Librium
Luminol
marijuana
Mebarol
mescaline
metabolism
Methedine
morphine
motor coordination
narcolepsy
narcotic
nausea
nicotine
nutrition
Nimbutal
opium
Optimil
Parest
peyote
physical tolerance
psilocybin
psychological
Quaalude
Reserpine
Seconal
Serax
Sonmafac
Sopor
spasm
Stellazine
stimulant
tension
tetrahydrocannabinol
therapeutic
Thorazine
tolerance
tranquilizer
Tranxene
Tuinal
Valium
Veronal
vomit
withdrawal

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TEST SPECIFICATIONS
FACTS ABOUT ALCOHOL AND DRUG USE

ENERAL DESCRIPTION

hildren are presented with statements about physical, psychological, and social consequences of the use of alcohol, marijuana, inhalants, hallucinogens, depressants, stimulants, nd narcotics. Children indicate whether each statement is rue or false.

AMPLE ITEM

This test has 20 sentences. Read each one. If the sentence is true, put a check under the word TRUE. If the sentence is false, put a check under the word FALSE.

TRUE	FALSE		
____	____	1.	Alcohol is a chemical found in drinks like beer, wine, and hard liquor.

TIMULUS ATTRIBUTES

1. A test item will consist of a single-sentence statement that the child is to judge as true or false. This statement will contain information related to a potential physical, psychological, or social consequence of alcohol or drug use.

2. All test items will be derived from the specifications supplement Facts About Alcohol and Drug Use. This supplement presents statements about alcohol and drug use which are based upon empirical evidence or expert consensus. The statements are organized into sections, with each section containing information about one category of substance.

3. Each statement on the supplement consists of one main idea related to the consequences of alcohol and drug use. A statement either (a) describes the nature of a consequence or its effects on a particular subject, or (b) presents a correlational or causal relationship between two subjects.

4. A test item will be based on a single statement selected from the supplement. If the supplement statement contains multiple parallel elements, only one of the elements will be used in the test item.

   Example of a supplement statement with multiple parallel elements

   Marijuana use causes the heart to speed up, the eyes to get red, and the throat to feel dry.

5. A test item will present a supplement statement in either accurate or inaccurate form. An accurate test item can be created in one of the following two ways:

   a. Direct restatement: Reiterating a statement exactly as it appears on the supplement.

   b. Paraphrase: Rephrasing a supplement statement to communicate the same message in different words. This rephrasing may include substituting synonyms for words in the statement and/or reordering words within the statement. The quantitative portion of a supplement statement may not be paraphrased.

      Example of a test item created by paraphrase

      Supplement statement: Drinking too much alcohol can make a person drunk.

      Test Item: A person can get drunk by drinking too much alcohol.

6. An inaccurate test item will be based on a supplement statement or a paraphrase of that statement. An inaccurate item can be created in one of the following three ways:

   a. Negation: Rewording a supplement statement to have the opposite meaning. If the statement is worded positively, negation is accomplished by adding a negative word or phrase to the statement. If the statement is worded negatively, negation is accomplished by taking out a negative word or phrase.

      Example of a test item created by negation

      Supplement statement: Alcohol is high in calories.

      Test item: Alcohol is not high in calories.

b. Mutual exclusivity: Transforming a supplement statement to communicate a message that is mutually exclusive with the original message. This transformation can be accomplished by either (1) changing a single verb, adjective, or adverb in the original statement to a word or phrase with a contradictory meaning, (2) changing a comparative statement to either reverse the direction of the comparison made or make both terms being compared equal, or (3) changing a quantitative value to one that is different than the one given. A quantitative change must result in a new value that makes the original statement false, rather than a value that allows the statement to remain true because it represents a subset of the original statement. A quantitative change must be expressed in the same terms as the original value.

Examples of test items created by transformation to a mutually exclusive statement

Supplement statement: Alcohol has few nutrients needed for growth and good health.

Test item: Alcohol has many nutrients needed for growth and good health.

Supplement statement: Marijuana smoke has more cancer-causing chemicals than tobacco smoke.

Test item: Marijuana smoke has less cancer-causing chemicals than tobacco smoke.

Supplement statement: Alcohol use is the cause of more than 50% of all traffic accidents.

Test item: Alcohol use is the cause of more than 75% of all traffic accidents.

A test item will contain a maximum of 25 words. These words will be no higher than a fourth grade reading level on the IOX Basic Skills Word List. Terms not found on the word list may be used only if they are listed on the Technical Terms Supplement.

A test will contain an approximately equivalent number of accurate and inaccurate test items. These items will proportionately represent each of the seven categories. Items will be randomly selected from the supplement statements within each category. All items will be reviewed by content experts and modified as needed based upon this review.

9. All of the procedures for creating test items will be used as equally as possible, with the exception of negation of a positively-stated supplement statement. This type of change will be used only when no other transformation is possible, as it results in a test item which requires the respondent to recognize that a negatively-stated idea is not accurate, in effect creating a double negative.

RESPONSE ATTRIBUTES

1. Two response columns will be provided. One column will be labeled "TRUE" and the other will be labeled "FALSE."

2. The correct answer to a question will be "TRUE" if the statement is accurate, and "FALSE" if the statement is inaccurate.

SPECIFICATIONS SUPPLEMENT
FACTS ABOUT ALCOHOL AND DRUG USE

ALCOHOL

What is alcohol?

1. Alcohol is a chemical found in drinks like wine, beer, and hard liquor.

2. Although there are many types of alcohol, only the kind in alcoholic drinks can make a person drunk.

3. Alcohol is high in calories.

4. Alcohol has few nutrients needed for growth and good health.

How can alcohol affect you?

5. Drinking too much alcohol can make a person drunk.

6. Alcohol changes how a person feels and acts.

7. People who are drunk may have trouble talking or walking straight, may feel dizzy, may fall down, or may fall asleep.

8. Alcohol gets into a person's blood very quickly and affects the brain and body for some time.

9. How alcohol affects a person depends on (a) how fast a person drinks, (b) how much alcohol is in the drink, (c) whether a person has eaten before drinking, (d) how much a person weighs, (e) how a person feels.

10. Anyone can become physically addicted to alcohol.

11. People who drink too much can harm their health.

12. People who are drunk may have trouble remembering things, making decisions, and learning.

Alcohol and the Law

13. It is against the law for a drunk person to drive a car.

14. It is against the law for children to buy or be served alcohol in public.

Reasons why people drink alcohol

15. Some people drink when they are with friends or at parties.

16. Some people drink to help them relax or for medical reasons.

17. Some people drink when taking part in religious services.

18. People often drink to celebrate special holidays.

Alcohol can be a problem

19. One out of every eight adults in the United States has a drinking problem.

20. People who drink too much have problems at work or school.

21. People who drink too much harm themselves and their families.

22. Alcohol misuse is the biggest drug problem in the United States.

23. Alcohol use is the cause of more than 50% of all traffic accidents.

Who has a drinking problem?

24. People who often feel the need to have a drink have a drinking problem.

25. People who often drink in order to feel drunk have a drinking problem.

26. People who often drink in order to escape from their problems have a drinking problem.

27. People who miss work or school because of their drinking have a drinking problem.

28. People who are drunk while driving have a drinking problem.

29. People who get into trouble with the police because of their drinking have a drinking problem.

MARIJUANA

30. Hashish usually has stronger effects on a person than marijuana.

31. Marijuana is usually rolled up like a cigarette and smoked, although it is sometimes eaten.

32. Hashish is usually smoked in a pipe.

33. When a person uses marijuana, things begin to look, feel, smell, taste, and sound different.

34. The effects of marijuana make reading, speaking, doing arithmetic problems, and remembering things more difficult.

35. Marijuana smoke has more cancer-causing chemicals than tobacco smoke.

36. Heavy marijuana use may harm the lungs.

37. Marijuana use causes the heart to speed up, the eyes to get red, and the throat to feel dry.

38. Many of the effects of marijuana on a growing person are still unknown.

39. The use and sale of marijuana is illegal except in very special medical cases.

INHALANTS

40. Common household products such as glue, spray paint and other spray products, paint thinner, and gasoline are used as inhalants.

41. The fumes from inhalants may be sniffed and can change the way a person sees, hears, and feels things for a short time.

42. People who sniff inhalants may have trouble speaking and keeping their balance, may become dizzy, and may have headaches and nausea.

43. The fumes from inhalants cut off oxygen to the brain and lungs.

44. Regular heavy use of inhalants may damage the kidneys, liver, and brain, or even cause death.

45. Even though sniffing fumes is very dangerous, young people are likely to use inhalants because they do not cost much.

HALLUCINOGENS

Nature of Hallucinogens

46. Hallucinogens change the way a person sees, hears, and feels things.

47. Some common hallucinogens are peyote, mescaline, psilocybin (magic mushrooms), LSD (acid), and PCP (angel dust).

48. Hallucinogens come in powder, crystals, and different kinds of pills.

Physical Effects

49. Hallucinogens can cause the heart to beat faster, the body temperature to rise, numbness, feelings of cold, shaking, and upset stomachs.

Psychological Effects

50. People using hallucinogens may become mixed up about what is real, think they "see" sounds and "hear" colors, and lose their sense of time, direction, and distance.

Dangers of Use

51. The effects of hallucinogens can be different each time the drug is taken.

53. Some people become very afraid and upset while using hallucinogens.

53. Hallucinogen users who have bad times when they take the drug may relive those bad times over again.

54. People who are using hallucinogens may act strangely and harm themselves or others.

55. PCP is thought to be one of the most dangerous drugs, even in small amounts.

DEPRESSANT DRUGS

56. Barbiturates, tranquilizers, and sleeping pills are depressant drugs.

57. Common names for depressants are "barbs," "downers," "reds," "Quualudes," and "Valium."

58. Depressant drugs slow down the nervous system.

59. Depressant drugs relax the body, make a person feel less worried, and bring on sleep.

60. People who take large amounts of depressants may not be able to talk clearly, may have trouble walking, and may become confused, dizzy, or sleepy.

61. People sometimes forget how many depressant pills they have taken and take more than is safe.

62. People can die from taking too many depressant pills at one time.

63. People can die from drinking alcohol and taking depressant drugs at the same time.

64. One-third of all drug deaths are caused by depressant drugs.

65. People who use a lot of depressant drugs will develop a physical need to continue taking the drugs.

66. It can be very dangerous for people who have developed a need for depressants to suddenly stop taking them.

67. Anyone who uses depressants heavily should see a doctor before he or she stops taking the drugs.

STIMULANTS

68. Stimulants speed up the body and make a person feel more awake.

69. Caffeine, cocaine, amphetamines, and speed are the most common stimulants.

70. Caffeine is found in coffee, tea, and some soft drinks.

71. Amphetamines are commonly called uppers or pep pills.

72. Stimulants do have a few medical uses, but they are often used incorrectly by people to push themselves beyond their usual limits.

73. Stimulants make people feel as if they can keep going without having to rest.

74. Stimulants can make people feel nervous and cause a lack of hunger.

75. When the effects of stimulants wear off, a person may get a headache or feel very tired and unhappy.

76. People who use stimulants heavily must take more and more of the drug to feel the same thing.

77. Large amounts of a stimulant can make a person act wildly, cause convulsions, coma, brain damage, or even death.

NARCOTIC DRUGS

Nature of Narcotic Drugs

78. Some common narcotics are opium, morphine, heroin, and codeine.

79. Some narcotics are legal and are used to stop pain, and to bring on sleep.

80. Narcotics slow down breathing and heart rate, cause sleepiness, and make it hard to see, walk, talk, and think.

81. Any narcotic can be dangerous if it is not used correctly.

82. Taking too much of a narcotic can cause death.

83. A person who uses narcotics often needs more and more of the drug to feel its effects.

84. Regular narcotics users who stop taking the drugs may suffer from shakes, chills, watering eyes and nose, vomiting, and pain.

85. It is not legal for anyone to use heroin.

86. Pregnant women who use heroin regularly will have babies born with a heroin problem.

87. People who use heroin often suffer from sicknesses caused by dirty needles.

TECHNICAL TERMS SUPPLEMENT

FACTS ABOUT ALCOHOL AND DRUG USE

acid
addicted
adult
affect
alcohol
alcoholic
amphetamines
barbiturates
barbs
calories
cancer
chemical
cigarettes
cocaine
codeine
coma
convulsions
death
depressant
dizzy
drunk
effect
fumes
gasoline
hallucinogen
hashish
heroin
inhalants
kidney
legal
liquor
liver
lungs
marijuana
medical
mescaline
morphine
mushrooms
narcotics
nausea
nervous system
numbness
nutrients
opium
oxygen
physical
pregnant
psilocybin
Quaaludes
religious
stimulant
tranquilizer
Valium
vomiting

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TEST SPECIFICATIONS
CAUSES AND SIGNS OF ALCOHOLISM

GENERAL DESCRIPTION

Individuals are presented with statements about physical, psychological, social, and behavioral symptoms, as well as causal factors of alcoholism. Individuals indicate whether each statement is true or false.

SAMPLE ITEM

> **This test consists of 20 statements about the causes and signs of alcoholism. Some of the statements are true and some are false. If you think a statement is true, put a check in the column labeled TRUE. If you think a statement is false, put a check in the column labeled FALSE.**

TRUE	FALSE		
____	____	1.	Individuals with a drinking problem often prefer to drink alone.

STIMULUS ATTRIBUTES

1. A test item will consist of a single-sentence statement that the individual is to judge as true or false. This statement will contain information related to a potential physical, psychological, social or behavioral symptom or causal factor of alcoholism.

2. All test items will be derived from the specifications supplement Causal Factors and Symptoms of Alcoholism. This supplement presents statements about alcohol use which are based upon either empirical evidence or expert consensus. The statements are organized into sections with each section containing information about one causal factor or type of symptom.

3. Each statement on the supplement consists of one main idea related to the causal factors and symptoms of alcoholism. A statement either (a) describes the nature of a causal factor or symptom or its effects on a particular subject, or (b) presents a correlational or causal relationship between two subjects.

4. A test item will be based on a single statement selected from the supplement. If the supplement statement contains multiple parallel elements, only one of the elements will be used in the test item.

   Example of a supplement statement with multiple parallel elements

   After long periods of heavy regular alcohol use individuals frequently experience delirium, muscle tremors, and hallucinations.

5. A test item will present a supplement statement in either accurate or inaccurate form. An accurate test item can be created in one of the following two ways:

   a. Direct restatement: Reiterating a statement exactly as it appears on the supplement.

   b. Paraphrase: Rephrasing a supplement statement to communicate the same message in different words. This rephrasing may include substituting synonyms for words in the statement and/or reordering words within the statement.

      Example of a test item created by paraphrase

      Supplement statement: Individuals with a drinking problem usually develop guilt feelings about their drinking behavior.

      Test Item: People with drinking problems usually feel guilty about their drinking behavior.

6. An inaccurate test item will be based on a supplement statement or a paraphrase of that statement. An inaccurate item can be created in one of the following two ways:

   a. Negation: Rewording a supplement statement to have the opposite meaning. If the statement is worded positively, negation is accomplished by adding a negative word or phrase to the statement. If the statement is worded negatively, negation is accomplished by taking out a negative word or phrase.

      Example of a test item created by negation

      Supplement statement: Individuals with a drinking problem usually feel uncomfortable when alcohol is not available.

Test item: Individuals with a drinking problem usually feel uncomfortable when alcohol is available.

b. *Mutual exclusivity*: Transforming a supplement statement to communicate a message that is mutually exclusive with the original message. This transformation can be accomplished by either (1) changing a single verb, adjective, or adverb in the original statement to a word or phrase with a contradictory meaning, or (2) changing a comparative statement to either reverse the direction of the comparison made or make both terms being compared equal.

Examples of test items created by transformation to a mutually exclusive statement

Supplement statement: Individuals with a drinking problem increase their tolerance for alcohol by drinking larger amounts of alcohol.

Test item: Individuals with a drinking problem decrease their tolerance for alcohol by drinking larger amounts of alcohol.

Supplement statement: Individuals with a drinking problem usually drink more rapidly than others in a social situation.

Test item: Individuals with a drinking problem usually drink at the same rate as others in a social situation.

A test item will contain a maximum of 25 words. These words will be no higher than an eighth grade reading level on the *IOX Basic Skills Word List*. Technical terms not found on the word list may be used only if they are listed on the *Technical Terms Supplement*.

A test will contain an approximately equivalent number of accurate and inaccurate test items. These items will be selected according to the following procedures:

a. One item will be randomly selected from each section of the supplement.

b. The rest of the items will be randomly selected from the supplement as a whole.

c. All of the items will be reviewed by content experts and modified as needed based upon this review.

9. All of the procedures for creating accurate and inaccurate test items will be used as equally as possible, with the exception of negation of a positively-stated supplement statement. This type of change will be used only when no other transformation is possible, as it results in a test item which requires the respondent to recognize that a negatively-stated idea is not accurate, in effect creating a double negative.

RESPONSE ATTRIBUTES

1. Two response columns will be provided. One column will be labeled "TRUE" and the other will be labeled "FALSE."

2. The correct answer to a question will be "TRUE" if the statement is accurate, or "FALSE" if the statement is inaccurate.

SPECIFICATIONS SUPPLEMENT
CAUSAL FACTORS AND SYMPTOMS OF ALCOHOLISM

Physiological Symptoms

1. Individuals with a drinking problem often experience blackouts or temporary memory losses after drinking.

2. Individuals with a drinking problem may drink alcoholic beverages to overcome the hangover effects from prior drinking.

3. Individuals with a drinking problem increase their tolerance for alcohol by drinking larger amounts of alcohol.

4. After long periods of heavy regular alcohol use individuals frequently experience delirium, muscle tremors, and hallucinations.

5. Alcoholics who drink instead of eating usually show symptoms of malnutrition.

Psychological Symptoms

6. Individuals with a drinking problem tend to drink more heavily than usual when in trouble or under pressure.

7. Individuals with a drinking problem usually develop guilt feelings about their drinking behavior.

8. Individuals with a drinking problem usually use alcohol to help them relax.

9. Individuals with a drinking problem usually feel uncomfortable when alcohol is not available.

10. Individuals with a drinking problem usually become angry if questioned about their drinking.

Behavioral Symptoms

11. Individuals with a drinking problem usually gulp drinks, or drink more rapidly than others in a social situation.

12. Individuals with a drinking problem are likely to drink larger quantities or more frequently than others in a social situation.

13. Individuals with a drinking problem may hide bottles of alcohol around the house or in the car.

14. Individuals with a drinking problem are likely to sneak drinks throughout the day.

15. Individuals with a drinking problem often prefer to drink alone.

16. Individuals with a drinking problem tend to get drunk at inappropriate times and places.

17. Individuals with a drinking problem often try to change the time and place of their drinking and the type of alcoholic beverage they consume.

18. Individuals with a drinking problem often develop a system of lies and excuses to cover up their drinking behavior.

19. Individuals with a drinking problem may have a few drinks before attending social functions.

20. Individuals with a drinking problem tend to have periods of nonstop drinking.

Causal Factors

21. There may be physiological reasons for individuals to drink heavily.

22. The desire to create or maintain the positive physical and emotional feelings associated with drinking may cause individuals to drink heavily.

23. Experts believe that individuals who drink heavily do so in order to reduce negative emotions such as loneliness, boredom, tension from financial or work related problems, disappointments, and social pressures from peer groups.

24. Individuals with serious personality problems tend to drink more heavily than do well-adjusted individuals.

25. Individuals who drink large amounts of alcohol tend to be insecure, anxious, and dissatisfied with themselves and their lives.

26. Experts believe that poor home environment, parental neglect, and/or lack of parental control causes children of alcoholic parents to tend more toward alcoholism than other children.

27. Experts believe that because alcoholic parents set an example of heavy drinking, the children of alcoholics tend more toward alcoholism than other children.

TECHNICAL TERMS SUPPLEMENT
CAUSES AND SIGNS OF ALCOHOLISM

delirium
hallucinations
malnutrition
muscle tremors
physiological
psychological
tension
tolerance

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TEST SPECIFICATIONS
USING ALCOHOL RESPONSIBLY

GENERAL DESCRIPTION

Individuals are presented with descriptions of situations in which fictitious persons either have been or will be drinking alcohol. Individuals are asked to select an appropriate, responsible course of action from among possible options or to indicate that none of the suggested options is appropriate.

SAMPLE ITEM

This test presents descriptions of people who want to use alcohol responsibly. Assume that each individual is of average weight and has an average tolerance for alcohol.

Read each item. Circle the letter of the appropriate action for the person to take. An appropriate action is one that is:

(1) safe for the person and others, and

(2) effective in controlling the effects of alcohol.

If there is no choice presented that is both safe and effective, circle choice D, "None of the above."

1. Lois is planning on going out for some drinks with friends after work. Afterwards, she wants to drive home safely. An appropriate action for Lois to take would be to:

   A. Eat a big breakfast that day. (incorrect)

   B. Drink several cups of strong coffee before going home. (incorrect)

   C. Wait at least one hour before driving for each drink consumed. (correct)

   D. None of the above. (incorrect)

STIMULUS ATTRIBUTES

1. A test item will begin with a brief description of a situation in which an individual either has been drinking or will be drinking. The description will be followed by the directive, "An appropriate action for (name of person) to take would be to:"

2. The situation description will contain the following elements:

   a. a statement of the setting in which the drinking occurs.

   b. a statement of any pertinent information about the drinking situation such as the number of drinks consumed or the type of drink.

   c. a statement of a purpose or expectation held by the person (e.g., to drive home safely).

   The situation description may also include a statement of the way the individual is feeling or acting as a result of drinking (e.g., relaxed, sleepy) and/or a statement of the time period during which drinking has occurred.

3. Descriptions of the individual's feelings or actions will be consistent with the amount of alcohol consumed and the time period during which it was consumed.

4. The intention of the described individual will be to use alcohol responsibly by either:

   a. minimizing the effects of alcohol to be consumed, or

   b. making safe and effective accommodations to alcohol already consumed.

5. A test question will be no more than 50 words in length and will contain no words above an eighth grade level on the IOX Basic Skills Word List.

RESPONSE ATTRIBUTES

1. Four answer choices will follow each test question. The first three answer choices will describe plausible actions that an individual might take to accomplish the purpose or expectation stated in the description. The fourth answer choice will be, "None of the above." This choice will be used to indicate that none of the first three answer choices is an appropriate (i.e., safe and effective) procedure for accomplishing the stated purpose.

2. The correct answer choice for a test question will either describe a specific example of a technique that is safe and effective in accomplishing the intention stated in the situation description or, if all of the specific choices given describe ineffective techniques, will be "None of the above."

3. An answer choice that describes a specific example of a technique that is safe and effective will be based on one of the following responsible usage techniques:

    a. Eating something within one hour before drinking, especially milk products or meat.

    b. Spacing drinks, allowing one hour to recover from the effects of each drink (3/4 oz. alcohol) consumed.

    c. Finding a safe alternative for conducting any activity that might involve risk to yourself or others (e.g., asking a friend to drive you home after a party if you have been drinking).

    d. Drinking a non-alcoholic beverage.

4. Incorrect answer choices will be plausible actions that are not safe and effective in the described situation. "None of the above" will also be an incorrect response if a correct answer is provided as one of the response options.

5. Incorrect responses that are ineffective or unsafe will be based on one of the following techniques:

    a. Substituting one type of alcoholic drink for another.

    b. Eating something after beginning to drink.

    c. Eating something more than one hour before drinking.

d. Eating something other than milk products or meat before drinking, if eating one of these foods also appears as an answer choice.

e. Drinking coffee before, during, or after drinking alcohol.

f. Avoiding drinking different kinds of liquor in the same drinking session.

g. Exercising in hopes of speeding up alcohol metabolism.

h. Engaging in deep-breathing in hopes of speeding up alcohol metabolism.

i. Taking a drug in hopes of counteracting the effects of alcohol.

j. Drinking large quantities of non-alcoholic beverages.

k. Asking someone who has had less to drink but still has consumed alcohol in dangerous quantities to help with a potentially hazardous activity.

5. The response option, "None of the above," will be the correct response for approximately one-fourth of the test items.

6. Answer choices will be no longer than 20 words in length and will contain no words above an eighth grade level on the IOX Basic Skills Word List.

TEST SPECIFICATIONS
DRINKING AND ASSERTIVENESS

GENERAL DESCRIPTION

Individuals are presented with descriptions of fictitious persons experiencing discomfort due to the presence of others who are drinking or offering alcohol. Individuals are asked to select from among possible options a course of action that incorporates assertiveness techniques or to indicate that none of the suggested options is appropriate.

SAMPLE ITEM

This test presents descriptions of people who feel uncomfortable because others are drinking or offering them alcohol. Each person wants to deal with the problem by using assertiveness techniques.

Read each item. Then circle the letter of the action which describes an assertive response to the situation described. If there is no assertive response presented, circle choice D, "None of the above."

1. Tom does not drink alcohol anymore. He is at a dinner party hosted by his boss, where he is offered wine with dinner. To act assertively, Tom should:

   (A) Accept a glass of wine but avoid drinking more than a few sips. (acquiescent)

   (B) Tell his host that he no longer drinks alcohol. (assertive)

   (C) Announce that it's bad to drink because liquor can harm the liver. (non-confrontational)

   (D) None of the above.

STIMULUS ATTRIBUTES

1. A test item will begin with a description of a situation in which an individual who is not drinking experiences discomfort due to the presence of others who are either drinking or encouraging drinking behavior. The description will be followed by the directive: "To act assertively, (name of person) should:"

2. The types of situations eligible for testing are as follows:

   a. Exposure to alcohol - an individual who is not drinking is exposed to the drinking of others or to the presence of alcohol. The nondrinking individual may be a person who never drinks or a person who is trying to stop or limit the amount of drinking.

   b. Peer pressure to drink - an individual who does not drink is encouraged to drink by friends or colleagues.

3. The stimulus portion of a test item will be no longer than 60 words in length and will contain no words above an eighth grade level on the IOX Basic Skills Word List.

4. On a given form of the test, the two types of drinking situations will be represented approximately equally.

RESPONSE ATTRIBUTES

1. Four answer choices will follow each test item. The first three answer choices will describe plausible actions that an individual might take to deal with the situation described. The fourth answer choice will be "None of the above." This choice will be used to indicate that none of the first three answer choices incorporates an assertive response to the problem situation.

2. The correct answer choice will either exemplify an assertive response to the situation presented or, if all of the specific choices given describe non-assertive responses, state "None of the above."

3. An answer choice that exemplifies an assertive response will present the individual either refusing an offer of alcohol or asking another person for assistance in stopping or reducing the amount of drinking.

4. Incorrect answer choices will be plausible actions that are not assertive in the described situation. "None of the above" will also be an incorrect answer choice if an assertive response is provided as one of the other response options.

5. Incorrect answer choices will describe responses to the problem situation that do not incorporate assertiveness techniques. These responses include *passive*, *aggressive*, *acquiescent* or *non-confrontational* responses. Each of these responses will differ from an assertive response in the following ways:

    a. *A passive response* will describe an individual who silently endures the discomfort of the drinking situation.

    b. *An aggressive response* will describe an individual who either suggests alternative behaviors that are in violation of the drinker's rights, (e.g., asks the drinker not to drink), makes a personal attack on the smoker (e.g., calls the drinker foolish), bullies the drinker (e.g., threatens to hurt the drinker), or takes an action that violates the drinker's rights (e.g., takes alcohol from the drinker.)

    c. *An acquiescent response* will describe an individual who either accepts alcohol in order to give the impression of drinking (e.g., accepts a drink but leaves it on the table), or actually engages in drinking behavior.

    d. *A non-confrontational response* will describe an individual who either only indirectly communicates personal discomfort with a drinking situation (e.g., makes a general announcement about how much everyone is drinking), changes his or her own behavior in order to avoid the situation, avoids responding to encouragement to drink by changing the subject, or requests a change in someone else's behavior that only partially alleviates the situation (e.g., asks the drinker to drink less).

6. The response option, "None of the above," will be the correct response for approximately one-fourth of the test items.

7. Answer choices will be no longer than 20 words in length and will contain no words above an eighth grade level on the *IOX Basic Skills Word List*.

TEST SPECIFICATIONS
COMMUNICATING ABOUT DRINKING

GENERAL DESCRIPTION

Individuals are presented with descriptions of fictitious persons who want either to express their feelings about their efforts to stop drinking or to request assistance with their efforts to control their drinking behavior. Individuals are asked to select from among three statements the one that most clearly and directly communicates the fictitious person's message or to indicate that none of the suggested statements is appropriate.

SAMPLE ITEM

> **This test presents descriptions of people who want to control or stop their drinking. They each have a message about drinking that they want to communicate to another individual.**
>
> **Read each item. Then circle the letter of the choice that expresses the individual's message clearly and directly. If there is no clear and direct response given, circle choice D, "None of the above."**

1. Jane wants to tell her husband how hard it is for her not have a drink when she is under pressure at work. The most clear and direct way for Jane to say this is:

   A. "You know what I mean about work pressure and needing a drink." (crystal ball message)

   B. "When I'm under so much pressure at work, I'm afraid I'll break down and have a drink." (correct)

   C. "People should try to stop drinking only when they aren't under pressure at work." (overgeneralized message)

   D. None of the above.

STIMULUS ATTRIBUTES

1. Test items will begin with brief descriptions of fictitious individuals who either wish to communicate their feelings about their efforts to stop drinking or wish to request assistance controlling their drinking behaviors. Each description will be followed by the directive: "The most clear and direct way for (name of individual) to say this is:"

2. The situation described in a test item will include the following elements:

   a. a description of the problem or situational context

   b. a description of the contents of the intended message

   c. a phrase indicating to whom the message is being communicated (optional)

3. The types of messages eligible for testing are as follows:

   a. Feelings regarding efforts to stop drinking - individuals communicate their feelings regarding the success or failure of their efforts to stop drinking. These feelings may cover a range of emotions from despair to elation.

   b. Requests for assistance with controlling drinking behavior - individuals who are trying to stop drinking ask others to help them control their drinking behavior. Requests for assistance may include asking for help in keeping track of the number of drinks consumed, asking others not to serve drinks to the individuals, or asking others not to drink while in their presence.

4. The stimulus portion of a test item will be no longer than 50 words and will contain no words above an eighth grade level on the *IOX Basic Skills Word List*.

RESPONSE ATTRIBUTES

1. Four answer choices will follow each test question. The first three answer choices will be quotations which are plausible statements of the message to be communicated. The fourth answer choice will be "None of the above." This choice will be used to indicate that none of the three quotations clearly and directly communicates the individual's message.

2. The correct answer choice will either be a clear and direct statement of the individual's message or, if all of the specific choices given are examples of ineffective communication techniques, will be "None of the above."

3. An answer choice that is a clear and direct statement of the individual's message will exemplify the following techniques of effective communication:

   a. The message states the entire intended message, not just a portion of it.

   b. The individual is direct and specific in communicating the intended message.

   c. The individual uses words and phrases whose meanings are clear and easily understood.

   d. The individual uses the word "I" in the quotation.

4. The incorrect answer choice will be a quotation that is ineffective in communicating the individual's message. "None of the above" will be an incorrect answer if a correct answer is provided as one of the other answer choices.

5. An incorrect answer choice that is ineffective in communicating the individual's message will exemplify one of the following ineffective communication techniques:

   a. Overgeneralized Message - individuals assume either that a single experience is representative of all experiences (e.g., "People should try to stop drinking only when they are not under pressure at work"), or that particular behaviors always occur in certain circumstances (e.g., "It will always be difficult for me not to drink when I'm under pressure at work.")

   b. Crystal Ball Message - individuals assume that others already know how they feel or what they want to communicate (e.g., "You know what I mean about work pressure and needing a drink.")

   c. Judgment Message - individuals blame or criticize (e.g., "You are blind not to see how difficult it is for me to stop drinking when there's pressure at work.")

   d. Incomplete Message - individuals provide only part of the information needed to send a complete message (e.g., "I'm under so much pressure at work.")

6. The response option "None of the above" will be the correct response for approximately one-fourth of the test items.

7. Answer choices will be no longer than 20 words and will contain no words above an eighth grade level on the _IOX Basic Skills Word List_.

TEST SPECIFICATIONS

TALKING ABOUT DRINKING

GENERAL DESCRIPTION

Children are presented with descriptions of fictitious persons who want either to express their feelings about not drinking or to tell others that they don't want to drink alcohol. Children are asked to select from among three statements the one that most clearly and directly communicates the fictitious person's message.

SAMPLE ITEM

This test is about young people who want to tell how they feel about drinking alcohol. Read about each person. Then choose the most clear and direct way of saying what the person wants to tell. Circle the letter of this choice.

1. While on a camping trip, some boys told Roger that he was chicken because he wouldn't sneak off with them to drink some beers. Roger wants to tell his father that he is upset about this. The most clear and direct way for Roger to say this is:

   A. "Several boys on the camping trip told me that I was chicken." (incomplete message)

   B. "You must know how bad I feel about being called chicken for not drinking." (crystal ball message)

   C. "I feel upset because some of the other boys called me chicken for not drinking." (correct)

STIMULUS ATTRIBUTES

1. Test items will begin with brief descriptions of fictitious young people who either want to express their feelings about not drinking or want to tell other people that they don't want to drink alcohol. Each description will be followed by the directive: "The most clear and direct way for (name of individual) to say this is:"

2. The situation described in a test item will include the following elements:

   a. a description of the problem or situational context

   b. a description of the contents of the intended message

   c. a phrase indicating to whom the message is being communicated (optional)

3. The types of messages eligible for testing are as follows:

   a. Feelings about not drinking - individuals communicate their feelings regarding their efforts not to drink. These feelings may cover a range of emotions, from elation at not drinking to depression when encountering peer pressure to drink.

   b. Communications about the desire not to drink - individuals who do not want to drink communicate this message to others who want them to drink.

4. The stimulus portion of a test item will be no longer than 50 words and will contain no words above a fourth grade level as listed in the IOX Basic Skills Word List, except for the following word: alcohol.

RESPONSE ATTRIBUTES

1. Three answer choices will follow each test question. Each choice will be a quotation which is a plausible statement of the message to be communicated.

2. The correct answer choice will be a clear and direct statement of the individual's message. It will exemplify the following techniques of effective communication:

   a. The message states the entire intended message, not just a portion of it.

   b. The individual is direct and specific in communicating the intended message.

   c. The individual uses words and phrases whose meanings are clear and easily understood.

   d. The individual uses the word "I" in the quotation.

3. An incorrect answer choice will be ineffective in communicating the individual's message. It will exemplify one of the following ineffective communication techniques:

   a. Overgeneralized Message - individuals assume either that a single experience is representative of all experiences (e.g., "Everyone gets upset when they're called names."), or that particular behaviors always occur in certain circumstances (e.g., "I'll always get upset when I'm called names for not drinking.")

   b. Crystal Ball Message - individuals assume that others already know how they feel or what they want to communicate (e.g., "You must know how bad I feel about being called chicken for not drinking.")

   c. Judgment Message - individuals blame or criticize (e.g., "You must be blind not to notice how upset I am about those boys calling me chicken.")

   d. Incomplete Message - individuals provide only part of the information needed to send a complete message (e.g., "Several boys on the camping trip told me that I was chicken.")

4. Answer choices will be no longer than 20 words and will contain no words above a fourth grade level on the IOX Basic Skills Word List, except for the following word: alcohol.

TEST SPECIFICATIONS

RESPONDING TO OTHERS ABOUT DRINKING

GENERAL DESCRIPTION

Individuals are presented with statements by fictitious persons. These statements either express a person's feelings about efforts to stop drinking or request assistance with efforts to control drinking behavior. Individuals are to select from among four statements the response that best communicates acceptance and understanding of the fictitious person's situation.

SAMPLE ITEM

This test presents statements by individuals who want to communicate their feelings about stopping drinking or want help controlling their drinking. Read each statement. Then circle the letter of the response that best communicates acceptance and understanding of the message.

1. Jane: "I've been trying to stop drinking, but I'm under so much pressure that I'm afraid I might have a glass of wine."

The response which best communicates acceptance and understanding of Jane's situation is:

A. "You feel that way because you think that things aren't going very well." (diagnosing)

B. "You're obviously not thinking clearly if you break down and have a drink now." (criticizing/disagreeing)

C. "You'll be sorry later if you break down and have a drink." (warning)

D. "You're fearful that because you're under pressure you won't have the willpower to keep from drinking." (correct)

STIMULUS ATTRIBUTES

1. Test items will begin with statements by fictitious persons who want either to communicate their feelings about stopping drinking or to request assistance controlling their drinking behavior. The statements will be followed by the directive, "The response that best communicates acceptance and understanding of (name of individual) is:"

2. The statement presented in a test item will include the following elements:

    a. a description of the problem or situational context and

    b. a description of the message contents

3. The types of messages eligible for testing are as follows:

    a. Feelings regarding efforts to stop drinking - individuals communicate their feelings regarding the success or failure of their efforts to stop drinking. These feelings may cover a range of emotions from despair to elation.

    b. Requests for assistance with controlling drinking behavior - individuals who are trying to stop drinking ask others to help them control their drinking behavior. Requests for assistance may include asking others not to cover up or excuse their drinking behavior, not to serve drinks to the individuals, or not to drink while in their presence.

4. The stimulus portion of a test item will be no longer than 45 words and will contain no words above an eighth grade level on the IOX Basic Skills Word List.

RESPONSE ATTRIBUTES

1. Four answer choices will follow each test question. Each choice will be a quotation which is a plausible response to the message being communicated.

2. The correct answer choice will exemplify the following techniques of effective responding:

    a. The respondent accurately paraphrases all of the sender's message.

b. The respondent includes the word "you."

c. By choice of words and by avoidance of any judgments, criticisms, or directives, the respondent implies respect, acceptance, and understanding for the sender.

3. An incorrect answer choice will exemplify one of the following ineffective communication techniques:

   a. Directing - the respondent tells the message sender how to solve a problem or suggests what to do (e.g., "You should try to relax more at work.")

   b. Warning - the respondent tells the message sender the consequences that will occur, with or without presenting facts or logic, or tells the message sender to consider the consequences (e.g., "You'll be sorry later if you break down and have a drink.")

   c. Criticizing/Disagreeing - the respondent criticizes or disagrees with the message sender (e.g., "You're obviously not thinking clearly if you break down and have a drink now.")

   d. Diagnosing - the respondent provides motives or explanations (e.g., "You probably feel that way because you think that your work is not going very well.")

4. Answer choices will be no longer than 20 words and will contain no words above an eighth grade level on the IOX Basic Skills Word List.

TEST SPECIFICATIONS

HOW MUCH DO THEY MATTER?

GENERAL DESCRIPTION

This inventory is a Likert scale in which individuals are asked to register their degree of agreement with a series of statements about the possible effects of using alcohol or drugs on a person's health, family, ability to make and keep friends, financial condition, ability to carry out daily tasks, appearance, and dependence on these substances, and about the legal danger and danger to others associated with alcohol or drug use.

SAMPLE ITEM

This survey is about how people might be affected by using drugs or alcohol not prescribed by their doctor.

Read each statement. Decide the extent to which you agree with it. Circle the appropriate letter to the left of the statement. Use the following scale:

SA = Strongly Agree
A = Agree
U = Uncertain
D = Disagree
SD = Strongly Disagree

SA A U D SD 1. Using drugs or alcohol every day can lead to dependence on them.

STIMULUS ATTRIBUTES

1. An item will consist of a statement about a possible effect of using alcohol or drugs on one's dependence on these substances, one's health, one's family, one's ability to make and keep friends, one's financial condition, one's ability to carry out daily tasks, one's appearance, as well as the legal danger and danger to others associated with alcohol or drug abuse.

2. The inventory will contain a proportionate number of items about each of the potential effects of substance abuse, with equal representation of the possibilities of substance abuse having a negative consequence and substance abuse having no impact or a positive effect.

3. Each statement will be 25 words or less in length. The words used will not exceed the eighth grade level on the IOX Basic Skills Word List.

RESPONSE ATTRIBUTES

1. The following five response options will be available for each item:

   SA = Strongly Agree
   A = Agree
   U = Uncertain
   D = Disagree
   SD = Strongly Disagree

2. Respondents are to use the response options to indicate the extent to which their beliefs about the effects of using alcohol or drugs are properly represented in an item's statement. Respondents circle the letter of their response to the left of each item.

SCORING AND INTERPRETATION

1. The rationale underlying this measure is that respondents who believe in the negative consequences of using alcohol or drugs on one's dependence on them, one's health, family, ability to make and keep friends, financial condition, ability to carry out daily tasks and appearance, and in the legal danger and danger to others associated with alcohol and drug abuse, will more frequently (a) agree with statements which describe a negative consequence of using alcohol or drugs and (b) disagree with statements which describe using alcohol or drugs as having no impact or a positive effect.

2. Point values are assigned to items according to whether the consequence of using alcohol or drugs is seen as negative or non-negative (i.e., neutral or positive). Items which describe a negative effect of using alcohol or drugs are assigned the following values: SA = 5 points, A = 4 points, U = 3 points, D = 2 points, SD = 1 point. Items which describe a non-negative effect of using alcohol or drugs are assigned the following values: SA = 1 point, A = 2 points, U = 3 points, D = 4 points, SD = 5 points.

High scores indicate a strong belief in the negative consequences associated with using large amounts of alcohol or drugs.

EASURE FORMAT

The following plan indicates the key characteristics of the "How Much Do They Matter?" inventory developed from these test specifications.

Item	Area of Effect	Negative Consequences
1	Dependence	Yes
2	Financial condition	Yes
3	Family	No
4	Ability to keep friends	No
5	Danger to others	Yes
6	Financial condition	No
7	Health	Yes
8	Ability to make friends	Yes
9	Danger to others	No
10	Appearance	Yes
11	Ability to carry out daily tasks	No
12	Legal risk	Yes
13	Ability to make friends	Yes
14	Dependence	No
15	Legal risk	No
16	Family	Yes
17	Appearance	No
18	Health	No
19	Ability to carry out daily tasks	Yes
20	Ability to make friends	No

TEST SPECIFICATIONS

DO THEY MATTER?

GENERAL DESCRIPTION

This inventory is a Likert scale in which children are asked to register their degree of agreement with a series of statements about the possible effects of using alcohol or drugs on one's health, family, grades, ability to make and keep friends, and addiction to these substances, and about the legal dangers associated with alcohol or drug use.

SAMPLE ITEM

The statements below are about how people might be affected by using drugs or alcohol. Circle the word that shows how much you agree with each statement.

YES = I agree
MAYBE = I am not sure if I agree
NO = I do not agree

YES MAYBE NO 1. Using drugs or alcohol can make you get lower grades in school.

STIMULUS ATTRIBUTES

1. An item will consist of a statement about a possible effect of using drugs or alcohol. These effects will pertain to the areas of addiction, health, family, grades, ability to make and keep friends, and the legal dangers associated with alcohol or drug use.

2. The inventory will contain a proportionate number of items about each of the potential effects of substance abuse, with equal representation of the possibilities of substance abuse having a negative consequence and substance abuse having no impact or a positive effect.

3. Each statement will be 20 words or less in length. The words used will not exceed the fourth grade level on the IOX Basic Skills Word List, except for the following words: addicted, affect, alcohol, drugs.

RESPONSE ATTRIBUTES

1. The following three response options will be available for each item:

   YES = I agree
   MAYBE = I am not sure if I agree
   NO = I do not agree

2. Children are to use the response options to indicate the extent to which their beliefs about the effects of using alcohol or drugs are properly represented in an item's statement. Respondents circle the word of their response to the left of each item.

SCORING AND INTERPRETATION

1. The rationale underlying this measure is that respondents who believe in the negative consequences of using alcohol or drugs on one's addiction to these substances, one's health, family, grades, ability to make and keep friends, and in the legal dangers associated with alcohol or drug use, will more frequently (a) agree with statements which describe a negative consequence of using alcohol or drugs and (b) disagree with statements which describe using alcohol or drugs as having no impact or a positive effect.

2. Point values are assigned to items according to whether the consequence of using alcohol or drugs is seen as negative or non-negative (i.e., neutral or positive). Items which describe a negative effect of using alcohol and drugs are assigned the following values: YES = 2 points, MAYBE = 1 point, NO = 0 points. Items which describe a non-negative effect of using alcohol or drugs are assigned the following values: YES = 0 points, MAYBE = 1 point, NO = 2 points.

3. High scores indicate a strong belief in the negative consequences associated with using alcohol or drugs.

MEASURE FORMAT

1. The following plan indicates the key characteristics of the "Do They Matter?" inventory developed from these test specifications.

Item	Area of Effect	Negative Consequences
1	Addiction	No
2	Health	Yes
3	Family	Yes
4	Grades	No
5	Ability to make friends	No
6	Legal risk	Yes
7	Health	No
8	Ability to make friends	Yes
9	Family	No
10	Ability to keep friends	Yes
11	Addiction	Yes
12	Grades	Yes
13	Ability to keep friends	No
14	Legal risk	No

TEST SPECIFICATIONS
WAYS OF COPING

GENERAL DESCRIPTION

Individuals are presented with situations involving pressures that commonly promote the use or abuse of alcoholic beverages or drugs. For each situation, various options for dealing with the pressure are presented, including the options of using alcohol and using drugs. Individuals indicate which, if any, of the options they would be willing to try in order to cope with the situation.

SAMPLE ITEM

This questionnaire describes various situations and different ways that people might deal with each one. Place a check next to any of the ways that you would be willing to try in order to deal with the situation. For each question, you may check any number of choices, or none at all.

1. You come home after a busy and frustrating day and you feel very tense.

   Which, if any, of the following activities would you be willing to try in order to relax?

   _____ Read the newspaper or a magazine
   _____ Take a walk
   _____ Have something to eat
   _____ Drink an alcoholic beverage
   _____ Meditate
   _____ Listen to music
   _____ Call a friend
   _____ Take a tranquilizer
   _____ Watch television
   _____ Take a warm bath

STIMULUS ATTRIBUTES

1. An item will consist of a one sentence description of an individual in a situation involving pressures that might promote the use or abuse of alcoholic beverages or drugs.

2. The psychological state of the individual will also be described. Individuals will be depicted as experiencing a negative feeling, for example, anger, anxiety, tension, loneliness, nervousness, or discouragement.

3. Respondents will be asked to select , "Which, if any, of the following activities would you be willing to try in order to (cope with the negative feeling)?"

4. Situations will be selected to be applicable to most individuals and described in terms that are as general as possible to ensure that most respondents will be likely to identify personally with those situations.

5. The descriptions of the situations will be 25 words or less in length. The words used will not exceed the eighth grade word level of the IOX Basic Skills Word List with the exception of words listed on the Techical Terms Supplement.

RESPONSE ATTRIBUTES

1. Ten response options will be listed below each item. Each option will describe a plausible alternative for coping with the described situation.

2. One of the response options for each item will indicate the use of alcoholic beverages and one option will indicate the use of drugs. The eight remaining response options will be other actions that might be taken to cope with the situation.

3. The non-alcohol and non-drug use options for an item will be actions that could be taken to cope with negative feelings in a healthy and effective manner. These actions will be selected from the categories of mental activities (e.g., reading a book, watching television); physical activities (e.g., exercising, cleaning house); systematic relaxation procedures (e.g., meditating, deep breathing); activities that promote social interaction (e.g., visiting with a friend; going to a social gathering); and help-seeking actions (e.g., seeing a counselor; analyzing the problem more carefully). One or more options per item will present an action that is less common and conventional than the others (e.g., learning biofeedback, calling a talk radio show).

4. Respondents are to place a check to the left of any response options that they would be willing to try in order to cope with the situation.

SCORING AND INTERPRETATION

1. The rationale underlying this measure is that the more options which are selected that do not involve the use of alcoholic beverages or drugs, the more open individuals are to using alternatives to those substances in order to cope with pressures.

2. Different scoring schemes may be employed and are best considered in tandem. Alcohol and drug responses can be considered independently or in combination in any of these procedures. In one procedure, a point is assigned for every selected response option that does not indicate the use of alcoholic beverages or drugs. Using this procedure, the maximum total score attainable of 80 points indicates a strong willingness to try a variety of techniques for dealing with pressures that commonly promote the use or abuse of alcoholic beverages.

3. In another scoring procedure, a point is assigned for every response option selected. The number of selected response options that do not indicate the use of alcoholic beverages or drugs is divided by the total number of options selected. Using this procedure, the maximum score attainable of 1.00 points (the result of the division process) indicates a strong tendency to be willing to use techniques other than alcoholic beverages or drugs for dealing with pressures that commonly promote the use or abuse of alcoholic beverages.

TECHNICAL TERMS SUPPLEMENT

WAYS OF COPING

aerobic
biofeedback
counselor
frustrate
marijuana
meditate
stimulate
technique
tension
therapist
tranquilizer
yoga

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TEST SPECIFICATIONS
DIFFERENT CHOICES

GENERAL DESCRIPTION

Children are presented with situations involving pressures that commonly promote the use or abuse of alcoholic beverages or drugs. For each situation, various options for dealing with the pressure are presented, including the option of using alcohol or using drugs. Children are asked to indicate which, if any, of the options they would be willing to try in order to cope with the situation.

SAMPLE ITEM

Each question tells about different feelings you might have and ways that some people might try to deal with each other. Place a check next to any ways that you would be willing to try. For each question, you may check any number of choices, or none at all.

1. You are alone at home on a long afternoon and you feel very lonely.

   Which, if any, of the following things would you be willing to try in order to feel less lonely?

   ____ Call up a friend on the telephone
   ____ Read a book
   ____ Smoke some marijuana
   ____ Clean up your room
   ____ Watch TV
   ____ Go for a walk in your neighborhood

STIMULUS ATTRIBUTES

1. An item will consist of a one sentence description of an individual in a situation involving pressures that might promote the use or abuse of alcoholic beverages or drugs.
2. The psychological state of the individual will also be described. Individuals will be depicted as experiencing a negative feeling, for example, anger, anxiety, tension, loneliness, nervousness, or discouragement.

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3. Respondents will be asked to select , "Which, if any, of the following activities would you be willing to try in order to (cope with the negative feeling)?"

4. Situations will be selected to be applicable to most individuals and described in terms that are as general as possible to ensure that most respondents will be likely to identify personally with those situations.

5. The descriptions of the situations will be 20 words or less in length. The words used will not exceed the fourth grade word level of the IOX Basic Skills Word List with the exception of words listed on the Technical Terms Supplement.

RESPONSE ATTRIBUTES

1. Six response options will be listed below each item. Each option will describe a plausible alternative for coping with the described situation.

2. One of the response options for each item will indicate the use of alcoholic beverages or the use of drugs. The five remaining response options will be other actions that might be taken to cope with the situation.

3. The non-alcohol and non-drug use options for an item will be actions that could be taken to cope with negative feelings in a healthy and effective manner. These actions will be selected from the categories of mental activities (e.g., reading a book, watching television); physical activities (e.g., exercising, cleaning house); activities that promote social interaction (e.g., visiting with a friend; going to a social gathering); and help-seeking actions (e.g., seeing a counselor; talking to parents).

4. Respondents are to place a check to the left of any response options that they would be willing to try in order to cope with the situation.

SCORING AND INTERPRETATION

1. The rationale underlying this measure is that the more options which are selected that do not involve the use of alcoholic beverages or drugs, the more open individuals are to using alternatives to those substances in order to cope with pressures.

2. Different scoring schemes may be employed and are best considered in tandem. Alcohol and drug responses can be considered independently or in combination in any of these procedures. In one procedure, a point is assigned for every selected response option that does not indicate the use of alcoholic beverages or drugs. Using this procedure, the maximum total score attainable of 50 points indicates a strong willingness to try a variety of techniques for dealing with pressures that commonly promote the use or abuse of alcoholic beverages.

3. In another scoring procedure, a point is assigned for every response option selected. The number of selected response options that do not indicate the use of alcoholic beverages or drugs is divided by the total number of options selected. Using this procedure, the maximum score attainable of 1.00 points (the result of the division process) indicates a strong tendency to be willing to use techniques other than alcoholic beverages or drugs for dealing with pressures that commonly promote the use or abuse of alcoholic beverages or drugs.

TECHNICAL TERMS SUPPLEMENT

DIFFERENT CHOICES

alcoholic
beer
calm
choice
drug
honestly
literature
marijuana
relax

TEST SPECIFICATIONS
HAVE A DRINK?

GENERAL DESCRIPTION

This measure is designed to assess individuals' perceived self-efficacy in being able to use alcohol in a controlled, responsible manner. Individuals are presented with a series of items describing situations in which people often consume alcoholic beverages and asked to indicate if they think that they might drink in each situation. If they indicate that they might drink, then they are asked to estimate, on a 0 to 100 numeral scale, how confident they are that they can drink responsibly in that situation.

SAMPLE ITEM

This survey describes various times when people often drink alcoholic beverages such as beer, wine, or cocktails. Read each statement. Circle YES or NO to show if you might drink at that time. If you circle YES, then use the Confidence Scale to show how certain you are that you would drink responsibly. Responsible drinking consists of moderate controlled use of alcoholic beverages so that there is no risk of physical, mental, or social harm to yourself or others.

The following examples show how the Confidence Scale is used.

	SITUATION	MIGHT YOU DRINK?	IF YES, HOW CERTAIN ARE YOU THAT YOU WOULD DRINK RESPONSIBLY?
1.	You are at a New Year's Eve party and many people are drinking heavily.	[✓ YES]/NO	20
2.	You are at home alone watching television.	[✓ YES]/NO	70
3.	You don't feel well and you think you are ill because of something you ate.	YES/[✓ NO]	______

Confidence Scale

0	10	20	30	40	50	60	70	80	90	100
Very Uncertain					Somewhat Certain					Very Certain

SITUATION	MIGHT YOU DRINK?	IF YES, HOW CERTAIN ARE YOU THAT YOU WOULD DRINK RESPONSIBLY?
1. You have just returned home after a very busy day and you still feel very tense.	YES/NO	_____

STIMULUS ATTRIBUTES

1. An item will describe a situation in which people often consume alcoholic beverages. The item will be written in the second person and will refer to someone's participation or feelings in a situation.

2. The situations presented in the items will be drawn from situations in which people might drink because of tension, loneliness, anger, social pressure, boredom, depression, sorrow, the need for energy, or the desire to have a good time.

3. Situations will be selected to be applicable to most individuals and will be described in terms that are as general as possible so that most respondents will be likely to identify personally with those situations.

4. Each item will be 20 words or less in length. The words used will not exceed the eighth grade level of the IOX Basic Skills Word List.

RESPONSE ATTRIBUTES

1. Two response options, a YES/NO answer and a confidence rating, are available for each item.

2. Respondents are to use the YES/NO option to indicate whether they might drink in the described situation.

3. If respondents answer YES to an item, they are then to indicate how confident they are that they can drink responsibly in the situation described by selecting a number from the following confidence scale:

Confidence Scale

0	10	20	30	40	50	60	70	80	90	100
Very Uncertain					Somewhat Certain					Very Certain

SCORING AND INTERPRETATION

1. The rationale underlying this measure is that the greater the degree of confidence respondents indicate that they have in drinking responsibly, the stronger the perceived self-efficacy of those respondents in being able to use alcohol in a controlled manner.

2. This inventory is scored by computing the mean strength of the rated confidence to drink responsibly. The sum of the confidence ratings is divided by the number of YES responses. A high score reflects a strong perceived ability to use alcohol responsibly in all the situations where the respondents might drink.

TEST SPECIFICATIONS

WOULD YOU?

GENERAL DESCRIPTION

This measure is designed to assess the intention of respondents to refrain from using specific substances. Individuals are asked if they would use alcoholic beverages or specified drugs if they were offered some by a friend. They are to select the response that best describes their probable behavior.

SAMPLE ITEM

> **Various substances are listed below. For each one, circle the response that describes what you would do if you were at a friend's house and your friend offered you some.**
>
> **YES = I would probably use it.**
> **MAYBE = I am not sure if I would use it.**
> **NO = I would probably not use it.**
>
> **Please do not put your name on this survey. Your answers are strictly confidential.**

Would you use ...

YES MAYBE NO 1. ... beer or wine?

STIMULUS ATTRIBUTES

1. Each item will name a specific substance or a category of substances. Substances will be identified by their generic name. In addition, where necessary common exemplars or slang names will be presented in parentheses next to the generic name, to help identify a substance.

2. The questionnaire will elicit information about each of the following substances: beer or wine, hard liquor, marijuana, psychedelics, amphetamines, barbiturates, inhalants, cocaine, and opiates.

RESPONSE ATTRIBUTES

1. The following three response options will be available for each item:

   YES = I would probably use it.
   MAYBE = I am not sure if I would use it.
   NO = I would probably not use it.

2. Respondents are to use the response options to indicate whether they would use a substance if a friend offered them some. Respondents circle the letter of their response to the left of each item.

SCORING AND INTERPRETATION

1. The rationale underlying this measure is that the more certain respondents are that they would not use specified substances when those substances are offered to them, the stronger the intentions of the respondents to refrain from using those substances.

2. Point values are assigned to items according to the certainty with which individuals indicate that they would not use specified substances, as follows: YES = 0 points, MAYBE = 1 point, NO = 2 points.

3. High scores indicate a strong intention to refrain from using specified substances.

4. By analyzing all of the items on this questionnaire as one set, program personnel can infer the intention to refrain from using both alcoholic beverages and specific drugs. Separate analyses by type of substance or by specific substance will permit separate inferences about the intention to refrain from using alcohol, the intention to refrain from using drugs, and the intent to refrain from using specific substances.

TEST SPECIFICATIONS

WHAT WOULD YOU DO?

GENERAL DESCRIPTION

This measure is designed to assess the intention of children to refrain from using specific substances. Children are asked if they would use specific alcoholic beverages or drugs if they were offered some by a friend. They are to select the response that best describes their probable behavior.

SAMPLE ITEM

Suppose that you are at a good friend's house and no one else is home. Your friend offers you one of the different things listed below. Would you use it? Circle an answer for each question.

YES = I would probably use it

MAYBE = I am not sure if I would use it

NO = I would probably not use it

Do not put your name on this paper.

Your answers will be a secret.

Would you use ...

YES	MAYBE	NO	1.	... beer?

STIMULUS ATTRIBUTES

1. An item will name a specific substance, using a common exemplar or slang name where appropriate.
2. The questionnaire will elicit information about each of the following substances: beer, wine, hard liquor, marijuana, hashish, LSD, PCP, speed, downers, glue, cocaine, and heroin.

RESPONSE ATTRIBUTES

1. The following three response options will be available for each item:
   YES = I would probably use it.
   MAYBE = I am not sure if I would use it.
   NO = I would probably not use it.

2. Children are to use the response options to indicate what they would do if a friend offered them a particular substance. Respondents circle the letter of their response to the left of each item.

SCORING AND INTERPRETATION

1. The rationale underlying this measure is that the more certain children are that they would not use specified substances when those substances are offered to them, the stronger the intentions of the respondents to refrain from using those substances.

2. Point values are assigned to items according to the certainty with which children indicate that they would use specified substances, as follows: YES = 0 points, MAYBE = 1 point, NO = 2 points.

3. High scores indicate a strong intention to refrain from using specified substances.

4. By analyzing all of the items on this questionnaire as one set, program personnel can infer the intention to refrain from using both alcoholic beverages and specific drugs. Separate analysis by type of substance or by specific substance will permit separate inferences about the intention to refrain from using alcohol, the intention to refrain from using drugs, and the intention to refrain from using specific substances.

TEST SPECIFICATIONS

MY BODY

GENERAL DESCRIPTION

This measure is designed to assess children's respect for their bodies. Children are asked to indicate whether they would engage in activities which are healthful and avoid activities which are harmful to the body.

SAMPLE ITEM

Read each question. Then put a check (√) under the answer that best tells what you are willing to do to take care of your body.

In order to take care of your body, are you willing to ...	CERTAINLY YES	PROBABLY YES	MAYBE	PROBABLY NOT	CERTAINLY NOT
1. ... exercise several times each week?	___	___	___	___	___

STIMULUS ATTRIBUTES

1. An item will specify a healthful activity or the avoidance of a harmful activity. Individuals are to indicate if they would be willing to take care of their bodies even if it means engaging in the healthful activity or avoiding the harmful activity.

2. The activities presented in the test items will be important to maintaining healthy bodies. These activities will include exercising; getting adequate rest; avoiding cigarettes, alcohol, and unnecessary drugs; following doctor's orders; seeing a doctor regularly; obtaining immunizations; eating properly; and avoiding unnecessary stress.

3. Each item will be 10 words or less in length. The words used will not exceed the fourth grade level on the IOX Basic Skills Word List, except for the following words: alcohol, cigarettes, diseases, immunizations.

RESPONSE ATTRIBUTES

1. The following five response options will be available for each item: CERTAINLY YES, PROBABLY YES, MAYBE, PROBABLY NOT, and CERTAINLY NOT.

2. Children are to use the response options to indicate their willingness to take care of their bodies in the specified manner. Respondents are to place a check in the appropriate space to the right of each item.

SCORING AND INTERPRETATION

1. The rationale underlying this measure is that the more often children indicate that they are willing, with certainty, to take care of their bodies even if it means engaging in healthful activities or avoiding harmful ones, the stronger their respect for their bodies.

2. Point values are assigned to items according to the certainty of the children in being willing to take care of their bodies, as follows: CERTAINLY YES = 5 points, PROBABLY YES = 4 points, MAYBE = 3 points, PROBABLY NOT = 2 points, CERTAINLY NOT = 1 point.

3. High scores indicate a strong respect for one's body, as evidenced by a willingness to engage in activities which are healthful and to avoid those which are not.

ANNOTATED EVALUATION BIBLIOGRAPHY

(1) American Psychological Association. Ethical principles in the conduct of research with human participants. Washington, D.C.: Author, 1973.

This treatise focuses on the appropriateness of carrying out various types of research investigations with human subjects. Because the American Psychological Association has had a long-standing concern about ethical issues in the conduct of research investigations, this publication will be of interest to numerous evaluators of health education programs.

(2) American Psychological Association, American Educational Research Association, National Council on Measurement in Education. Standards for educational and psychological tests. Washington, D.C.: Author, 1974.

This soon-to-be-revised volume presents the most widely used set of standards for psychological and educational tests. Frequently cited by users of educational tests, the standards have recently been employed in numerous judicial deliberations. Relatively brief, the standards should be consulted by health educators who employ assessment devices regularly.

(3) Anderson, L.W. Assessing affective characteristics in the schools. Boston: Allyn and Bacon, 1981.

Anderson provides an excellent set of practical suggestions for the creation of affective assessment instruments. He includes one of the most easily understood expositions of various scaling procedures including Likert, Thurstone, and Guttman scales.

(4) Berk, R.A. (Ed.). Criterion-referenced measurement: the state of the art. Baltimore: The Johns Hopkins University Press, 1980.

This collection of essays consists of papers presented at the first John Hopkins University National Symposium on Educational Research. The authors treat many of the important problems, both conceptual and technical, facing developers and users of criterion-referenced measures.

(5) Berk, R.A. (Ed.). Handbook of methods for detecting test bias. Baltimore: The Johns Hopkins University Press, 1982.

This collection of individual essays offers the reader an up-to-date depiction of methods currently available to detect the presence of bias in tests.

(6) Campbell, D.T., & Stanley, J.C. Experimental and quasi-experimental designs for research. Chicago: Rand McNally, 1966.

This volume, originally a chapter in a larger volume, has had substantial impact on the fields of research and evaluation. Evaluators of health education will wish to consider this truly classic treatment of data-gathering designs suitable for experimental and quasi-experimental settings.

(7) Churchill, G.A., Jr. Marketing research: methodological foundations (2nd ed.). Hinsdale, Ill: The Dryden Press, 1979.

Although written in the context of marketing research, this textbook covers several topics of vital importance in evaluation. Topics such as research design, data collection, sampling, and data analysis are covered in a readily understandable yet accurate way. An excellent resource.

(8) Cohen, J. Statistical power analysis for the behavioral sciences (Rev. ed.). New York: Academic Press, 1977.

Cohen offers a useful treatment of factors which should be considered when one draws samples for use in research or evaluation activities. Of special interest is the set of easy-to-use guidelines he offers for determining the estimated sample size necessary to detect differences between groups.

(9) Cook, T.D., & Campbell, D.T. Quasi-experimentation: design & analysis issues for field settings. Chicago: Rand McNally, 1979.

This widely cited volume provides a comprehensive treatment of quasi-experimental investigations in settings of substantial relevance to the concerns of health educators. There are excellent discussions included of internal and external validity, including the various threats to both types of validity. A systematic consideration of the commonly used data-gathering designs is offered, including an extended appraisal of interrupted time-series designs.

(10) Cook, T.D., & Campbell, D.T. The design and conduct of quasi-experiments and true experiments in field settings. In M.D. Dunnette (Ed.), Handbook of industrial and organizational psychology. Chicago: Rand McNally, 1976.

This is an updated version of the famous exposition of quasi-experimental and experimental data-gathering designs by Donald T. Campbell and Julian C. Stanley (see reference No. 6). An excellent discussion of four types of validity is featured in this essay.

(11) Cronbach, L.J. Course improvement through evaluation. Teachers College Record, May 1963, 64, 672-683.

An early piece, presenting the virtues of what would later be termed, "formative" evaluation. This article rings as true today as it did nearly two decades ago, and applies as much to evaluation in health education as it does to more traditional evaluation. Emphasizing the role of evaluation in gathering information which can improve programs, this article is well worth reading.

(12) Cronbach, L.J., and associates. Toward reform of program evaluation. San Francisco: Jossey-Bass, 1981.

A recent publication, this book considers the function of evaluation in a pluralistic society and presents 95 theses on the role of evaluators and evaluations. In addition to providing a contemporary conception of evaluation, it provides a historical and multidisciplinary perspective on the field. This volume will be of considerable interest to those evaluating health education programs.

(13) Cronbach, L.J., et al. Analysis of covariance in nonrandomized experiments: parameters affecting bias. Unpublished occasional paper, Stanford Evaluation Consortium, Stanford University, 1977.

A highly technical piece on the complications associated with using analysis of covariance, this article is recommended only for those prepared to handle a critical problem in a sophisticated way.

(14) Cronbach, L.J., & Furby, L. How should we measure 'change' - or should we? Psychological Bulletin, 1970, 74, 68-80.

A technical treatise on the dangers associated with using gain scores. A very significant piece, but recommended only for those with some psychometric training.

(15) Ebel, R.L. *Essentials of educational measurement* (3rd ed.). Englewood Cliffs, N.J.: Prentice-Hall, 1979.

This is a standard, easily read introductory text, covering important topics in the field of educational testing. Ebel, a prominent leader of traditional educational testing practices, provides a lucid treatment of a wide range of measurement topics.

(16) Green, L.W. Research methods translatable to the practice setting: from rigor to reality and back. In S. Cohen (Ed.) *New directions in patient compliance*. Lexington, Mass.: Lexington Books, 1979.

Green deals with a practical dilemma facing those who evaluate health education programs, namely, the necessity to make trade-offs between validity and feasibility in field settings. Six strategies for coping with evaluation under adverse circumstances are described.

(17) Green, L.W., & Figá-Talamanca, I. Suggested designs for evaluation of patient education programs. *Health Education Monographs*, September 1974, *2* (1).

In this essay Green and Figá-Talamanca suggest data-gathering designs for conducting evaluations of patient education programs. The authors also explore several issues related to evaluations of this variety.

(18) Hambleton, R.K., et al. Criterion-referenced testing and measurement: a review of technical issues and development. *Review of Educational Research*, Winter 1978, *48* (1), 1-48.

This is a comprehensive review of the field of criterion-referenced testing. Hambleton and his colleagues do a masterful job of isolating the key issues in criterion-referenced testing, then describing results of research investigations bearing on those issues. Somewhat technical at times, this review is one of the more widely cited essays dealing with criterion-referenced testing.

(19) Hays, W.L. *Statistics for the social sciences* (2nd ed.). New York: Holt, Rinehart, and Winston, 1973.

A comprehensive text dealing with basic and advanced statistical considerations. Somewhat technical at points, Hays nonetheless provides an excellent set of step-by-step guidelines to statistical practice.

(20) Hull, C., & Nie, N.H. Statistical packages for the social sciences (SPSS). New York: McGraw-Hill, 1978.

This is a widely used, well organized set of "canned" computer analysis programs for use in the social sciences. Health educators who have occasion to use computer analyses will find the SPSS manual most helpful.

(21) Joint Committee on Standards for Educational Evaluation. Standards for evaluations of educational programs, projects, and materials. New York: McGraw-Hill, 1981.

The development of these evaluation standards was spearheaded by a joint committee of the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education. Thirty standards are presented, addressing issues related to deciding whether to evaluate, defining the evaluation problem, designing the evaluation, budgeting for the evaluation, collecting and analyzing data, and reporting the evaluation. Intended for both consumers of evaluation and individuals conducting evaluations, this reference may be of most use to evaluators who are relatively new to the field.

(22) Levin, H.M. Cost-effectiveness analysis in evaluation research. In M. Guttentag & E.L. Struening (Eds.), Handbook of evaluation research (Vol. 2). Beverly Hills, CA.: Sage, 1975.

This essay probes the important considerations involved in determining cost-effectiveness of programs in the context of educational evaluations. Theoretical as well as practical guidelines are provided.

(23) Linn, R.L., & Slinde, J.A. The determination of the significance of change between pre- and post-testing periods. Review of Educational Research, 1977, 47, 121-150.

This article reviews many of the major issues in the measurement of change from pretesting to posttesting periods and suggests possible alternatives. These authors share the general sentiment of many others in the field that, "more is expected from gain scores than they can reasonably be expected to provide."

(24) Lord, F.H. Elementary models for measuring change. In C.W. Harris (Ed.), Problems in measuring change. Madison: Wisconsin Press, 1963.

An early treatise on the problems associated with measuring change. Although this chapter rapidly becomes very technical, the early sections provide an intuitive explanation of the difficulties with using gain scores.

(25) Oakland, T. (Ed.). Psychological and educational assessment of minority children. New York: Brunner/Mazel, 1977.

This collection of essays provides a series of useful suggestions for those who would become more sensitive to the possible bias present in educational tests.

(26) Popham, W.J. Educational evaluation. Englewood Cliffs, N.J.: Prentice-Hall, 1975.

This is an introductory text, written in fairly non-technical language, about the field of educational evaluation. Evaluators of health education programs will find it simple to translate the book's contents to their own specialties.

(27) Popham, W.J. Modern educational measurement. Englewood Cliffs, N.J.: Prentice-Hall, 1981.

This is an up-to-date treatment of varied topics in the field of educational measurement. Norm-referenced measurement and criterion-referenced measurement are both considered, with the special applications of criterion-referenced assessment emphasized. Chapters on the relationship of testing to teaching and the measurement of affect will be of special interest to health educators.

(28) Popham, W.J., & Sirotnik, K.A. Educational statistics: use and interpretation (2nd ed.). New York: Harper and Row, 1973.

This is an easily read introductory text dealing with the fundamental types of statistical considerations needed by program evaluators. It is intended for those who are not particularly comfortable with mathematical approaches to statistics.

(29) Riecken, H.W., & Boruch, R.F. Social experimentation: a method for planning and evaluating social intervention. New York: Academic Press, 1971.

This significant contribution to our thinking about large scale social interventions, their design and appraisal, provides a useful analysis of the ways that the experimental method can be employed defensibly in connection with major social programs.

(30) Rivlin, A.M., & Timpane, P.M. (Eds.). *Ethical and legal issues in social experimentation*. Washington, D.C.: Brookings Institution, 1975a.

Rivlin and Timpane explore the sorts of legal and ethical issues to which evaluators of health education programs must attend.

(31) Scriven, M. Prose and cons about goal-free evaluation. *Evaluation Comment*, 1972, *3*, 1-4.

In this essay Scriven offers goal-free evaluation as an antidote to excessive preoccupation with the program staff's expressed objectives. Scriven argues that evaluators should attend to the results produced by a program, not the rhetoric of its program goals.

(32) Scriven, M. The methodology of evaluation. In R.E. Stake and others (Eds.), *Perspectives on curriculum evaluation*. Chicago: Rand McNally, 1967.

This seminal article was the first essay in which Scriven distinguished between the now commonly accepted formative and summative roles of evaluators. Scriven ranges over a wide variety of topics, emphasizing the importance of comparative appraisals of two or more programs' merits.

(33) Siegel, S. *Nonparametric statistics for the behavioral sciences*. New York: McGraw-Hill, 1956.

This is the classic treatment of nonparametric statistical techniques. Although a bit out of date these days, Siegel's text offers the most easily understood treatment of nonparametric statistical procedures. Because of the author's admitted zealousness in support of nonparametric techniques, those using Siegel's text should also consult a critique of it by Robert Savage, Journal of American Statistical Association, 52 (September 1957): 331-344.

(34) Suchman, E.A. *Evaluative research: principles and practice in public service and social action programs*. New York: Russell Sage Foundation, 1967.

In this volume, Suchman provides extensive coverage of the application of the experimental research model in conducting evaluations. Although evaluation has come a long way since this book was written, it provides a clear description of the predominant conceptualization of evaluation in the past decade.

(35) Tukey, J.W. *Exploratory data analyses*. Reading, Mass.: Addison-Wesley, 1977.

Creative approaches to displaying and understanding data are provided by Tukey in this excellent demystification of data analysis.

(36) Webb, E.J., Campbell, D.T., Schwartz, R.D., Sechrest, L., & Grove, J.B. Nonreactive measures in the social sciences (2nd ed.). Dallas: Houghton Mifflin, 1981.

This charming volume provides readers with a series of powerful and clever tactics to secure data, particularly of an affective nature, without sensitizing respondents to the evaluator's purposes.

(37) Weiss, C.H. Evaluation research: methods of assessing program effectiveness. Englewood Cliffs, N.J.: Prentice Hall, 1972.

Weiss offers a pithy overview of prominent program evaluation considerations including the formulation of questions to be addressed, the design of the evaluation study, and the utilization of evaluation results. A paperback, this brief book (160 pp.) offers an excellent introduction to what Weiss refers to as "evaluation research."

(38) Worthen, B.R., & Sanders, J.R. Educational evaluation: theory and practice. Worthington, Ohio: C.A. Jones, 1973.

This volume was one of the earliest compilations of various program evaluation models applied to education. Included in the evaluation theorists whose views are presented in this book are Stake, Cronbach, Scriven, Tyler and others. Worthen and Sanders have authored sections of the book and have included a series of original chapters by a number of evaluation specialists. While focused on educational evaluation in general, the volume is of substantial relevance to program evaluation of health education programs.

(39) Zdep, S.M., & Rhodes, I.N. Making the randomized response technique work. (Reprinted from The Public Opinion Quarterly, Winter 1976-1977, 41.)

This easily read essay describes the randomized response technique, a procedure used to obtain sensitive information from respondents more accurately than if respondents were directly asked about sensitive information.

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